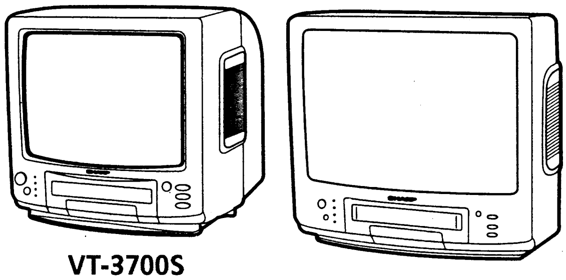
SHARP

SERVICE MANUAL
SERVICE-ANLEITUNG

S74X9VT3700S/

TV/VCR COMBINATION
TV/VIDEORECORDER-KOMBINATION
TELEVIDEO

Chassis No. VP-1


VT-3700S

VT-5400S

MODELS / MODELLS VT-3700S VT-5400S

In the interests of user-safety (Required by safety regulations in some countries) the set should be restored to its original condition and only parts identical to those specified should be used.

Im Interesse der Benutzer-Sicherheit (in einigen Länder durch Sicherheitzvorschriften gefordert) sollte dieses Gerät wieder auf seinen ursprünglichen Zustand eingestellt und nur die vorgeschriebenen Teile verwendet werden.

FEATURE

- Full Auto Search Tuning System
- On Screen Digital Channel/Sound Level/ Tuning Display, Control (Contrast, Colour, Brightness, Tint, P-Tone) Symbol and Level
- Blue Back Off Timer
- 42 Key, Wireless Remote Control Unit (VT-3700S)
- 56 Key, Wireless Remote Control Unit (VT-5400S)
- Channel Skip
- High Speed Video Search System (7 times)
- Dew Warning Indicator
- DPSS (Digital Program Search System)
- Quick Start Playback with Full Loading System
- Still/Slow Function with Noiseless Frame Still
- Digital Automatic Tracking Control
- Automatic Playback Function
- AHC (Automatic Head Cleaning System)
- Showview Programming System Teletext (only for VT-5400S)

MERKMALE

- Vollautomatische Senderabstimmung
- Digitale Bildschirmanzeigen für Kanal/ Lautstärke/ Senderabstimmung, Einstellsymbole und -pegel (Kontraste, Farbe, Helligkeit, Farbton, P-Ton)
- "Blue Back" Ausschalttimer
- Drahtlose Fernbedienung mit 42 Tasten (VT-3700S)
- Drahtlose Fernbedienung mit 56 Tasten (VT-5400S)
- Kanalüberspringen
- Schneller Videosuchlauf (7fach)
- Kondensationsbildung-Warnanzeige
- DPPS (Digitales Program-Such-System)
- Quick-Start-Wiedergabe mit Volladesystem
- Standbild/Zeitlupe-Funktion mit rauschfreien Standbildern
- Digitale automatische Spurlageregelung
- Automatischer Wiedergabefunktion
- AHC (Automatische Kopfreinigung)
- Showview Programmierungssystem-Teletext (nur für VT-5400S)

WARNING

The chassis in this receiver is partially hot. Use an isolation transformer between the line cord plug and power receptacle, when servicing this chassis.
To prevent electric shock, do not remove cover. No user — serviceable parts inside. Refer servicing to qualified service personnel.

WARNUNG

Das Chassis dieses Empfangsgerätes steht teilweise unter hohen Spannungen. Bei Wartungsarbeiten an diesem Chassis muß deshalb ein Isolationstransformator zwischen dem Netzkabelstecker und der Steckdose verwendet werden.
Gerätes befinden sich keine von Benutzer einstellbaren Teile. Wartung und Reparaturarbeiten müssen qualifiziertem Service-Personal überlassen werden.

SHARP CORPORATION

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SPECIFICATIONS

■ OUTLINE OF THE PRODUCT

Power Source: 220—240 V AC, 50/60 Hz
Power Consumption: **VT-3700S**: 77 W
VT-5400S: 98 W
Receiving Broadcast Standard: PAL System B/G
Receiving Channel: VHF; E2—S41 (48.25—463.25 MHz)
UHF; E21—E69 (471.25—855.25 MHz)
Receiving System: Sound; 5.5 MHz
Colour; PAL
Antenna Input Impedance: VHF/UHF; 75 ohm Unbalanced (DIN)
Video Signal: Input; 0.5~2.0 Vp-p / 75 ohm (RCA)
Output; 1.0 Vp-p / 75 ohm (RCA)
Audio Signal: Input; – 8 db / 47k ohm (RCA)
Output; – 8 db / 1k ohm (RCA)
Temperature: Operation; 5° C to 40° C
Strege; – 20°C to 60°C
Dimentions (Approx.): **VT-3700S**: 392 mm (W) x 371 mm (H) x 395 mm (D)
VT-5400S: 523 mm (W) x 488 mm (H) x 483 mm (D)
Weight (Approx.): **VT-3700S**: 14.2 kg
VT-5400S: 26.1 kg
Cabinet Material: Plastic
Accessories:
☐ Operation Manual
☐ Infrared Remote Control Unit
☐ Dry Batteries, Type AAA (x 2 pcs)
☐ Rod Antenna (VT-3700S)

■ TV SECTION

Viewing Area: **VT-3700S**: 33.54 cm Diagonal Measurement
VT-5400S: 50.8 cm Diagonal Measurement
Picture Power: **VT-3700S**: 22.0 kV at 750 μA Beam Current
VT-5400S: 25.0 kV at 950 μA Beam Current
Speaker Output: **VT-3700S**: 1.5 W at Max. (8 cm Round Dynamic x 1 pcs)
VT-5400S: 1.5 W at Max. (8 cm Round Dynamic x 1 pcs)
Picture Tube: Type; **VT-3700S**: VB370BVBK1U-S (Tint Tube)
VT-5400S: VB51JFC61X/*P or VB51JSY61X/*S (Tint Tube)
Heater; **VT-3700S**: 6.3 V, 300 mA
VT-5400S: 6.3 V, 680 mA
Focus; High Bi-Potential Electrolstatic

■ VCR SECTION

Outline: VHS Video System Colour Video Cassette Recorder
Format: VHS PAL Standard
Video Recording System: Rotary Slant Azimuth 2-Head Helical Scan System
Luminance: FM Recording
Chrominance: Low Frequency Converted Direct Recording
Video Signal System: PAL Colour
Cassette Tape: VHS Type Video Cassette Tape
Tape Width: 12.7 mm
Tape Speed: PAL; 23.39 mm/s (SP)
Recording/Playback Time: SP; Max. 240 min (with E-240)

Note: The antenna must correspond to the new standard DIN 45325 (IEC 169-2) for combined UHF antenna with 75 ohm connector.

Specifications are subject to change without prior notice.

IMPORTANT SERVICE NOTES

Maintenance and repair of this receiver should be done by qualified service personnel only.

SERVICING OF HIGH VOLTAGE SYSTEM AND PICTURE TUBE

When servicing the high voltage system, remove static charge from it by connecting a 10 k ohm Resistor in series with an insulated wire (such as a test probe) between picture tube dag and 2nd anode lead. (AC line cord should be disconnected from AC outlet.)

1. Picture tube in this receiver employs integral implosion protection.
2. Replace with tube of the same type number for continued safety.
3. Do not lift picture tube by the neck.
4. Handle the picture tube only when wearing shatterproof goggles and after discharging the high voltage completely.

X-RAY

This receiver is designed so that any X-Ray radiation is kept to an absolute minimum. Since certain malfunctions or servicing may produce potentially hazardous radiation with prolonged exposure at close range, the following precautions should be observed:

1. VT-3700S: When repairing the circuit, be sure not to increase the high voltage to more than 25.3 kV, (at beam 0 μA) for the set.
   VT-5400S: When repairing the circuit, be sure not to increase the high voltage to more than 29.3 kV, (at beam 0 μA) for the set.
2. VT-3700S: To keep the set in a normal operation, be sure to make it function on 22.0 kV + 1.5 kV – 2.0 kV (at beam 750 μA) in the case of the set. The set has been factory — Adjusted to the above-mentioned high voltage.
   VT-5400S: To keep the set in a normal operation, be sure to make it function on 25.0 kV ± 1.5 kV (at beam 950 μA) in the case of the set. The set has been factory — Adjusted to the above-mentioned high voltage.
   ∴ If there is a possibility that the high voltage fluctuates as a result of the repairs, never forget to check for such high voltage after the work.
3. Do not substitute a picture tube with unauthorized types and/or brands which may cause excess X-ray radiation.

BEFORE RETURNING THE RECEIVER

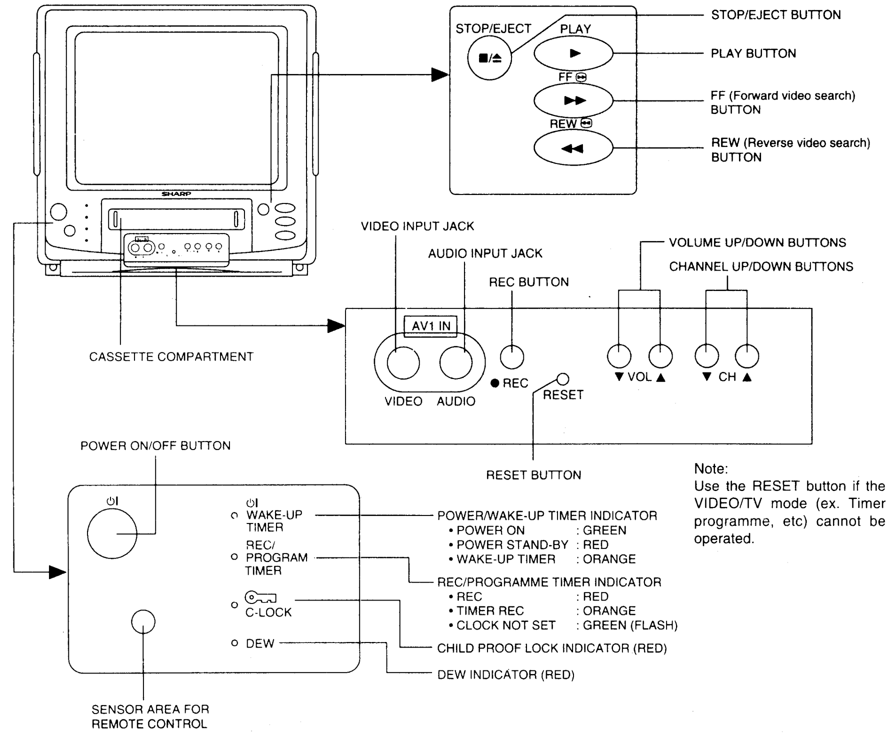
Before returning the receiver to the user, perform the following safety checks.

1. Inspect all lead dress to make certain that leads are not pinched or that hardware is not lodged between the chassis and other metal parts in the receiver.
2. Inspect all protective devices such as non-metallic control knobs, insulating fishpapers, cabinet backs, adjustment and compartment covers or shields, isolation resistor-capacity networks, mechanical insulators etc.

LOCATION OF USER'S CONTROL

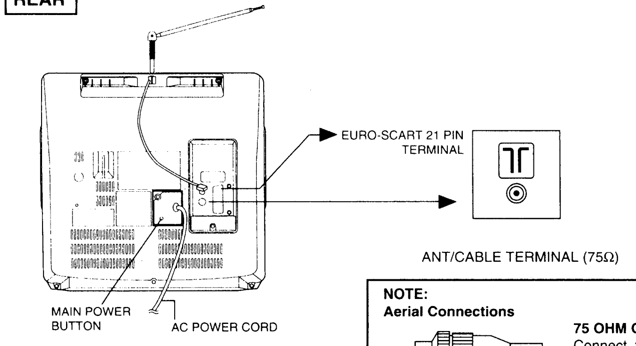
Description of Controls (VT-3700S)

FRONT

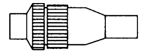

STOP/EJECT
PLAY
FF
REW
STOP/EJECT BUTTON
PLAY BUTTON
FF (Forward video search) BUTTON
REW (Reverse video search) BUTTON
VIDEO INPUT JACK
AUDIO INPUT JACK
REC BUTTON
VOLUME UP/DOWN BUTTONS
CHANNEL UP/DOWN BUTTONS
AV1 IN
VIDEO
AUDIO
● REC
RESET
▼ VOL ▲
▼ CH ▲
CASSETTE COMPARTMENT
POWER ON/OFF BUTTON
RESET BUTTON
WAKE-UP TIMER
REC/ PROGRAM TIMER
C-LOCK
DEW
POWER/WAKE-UP TIMER INDICATOR
• POWER ON : GREEN
• POWER STAND-BY : RED
• WAKE-UP TIMER : ORANGE
REC/PROGRAMME TIMER INDICATOR
• REC : RED
• TIMER REC : ORANGE
• CLOCK NOT SET : GREEN (FLASH)
CHILD PROOF LOCK INDICATOR (RED)
DEW INDICATOR (RED)
SENSOR AREA FOR REMOTE CONTROL

Note:
Use the RESET button if the VIDEO/TV mode (ex. Timer programme, etc) cannot be operated.

REAR


EURO-SCART 21 PIN TERMINAL
ANT/CABLE TERMINAL (75Ω)
MAIN POWER BUTTON
AC POWER CORD

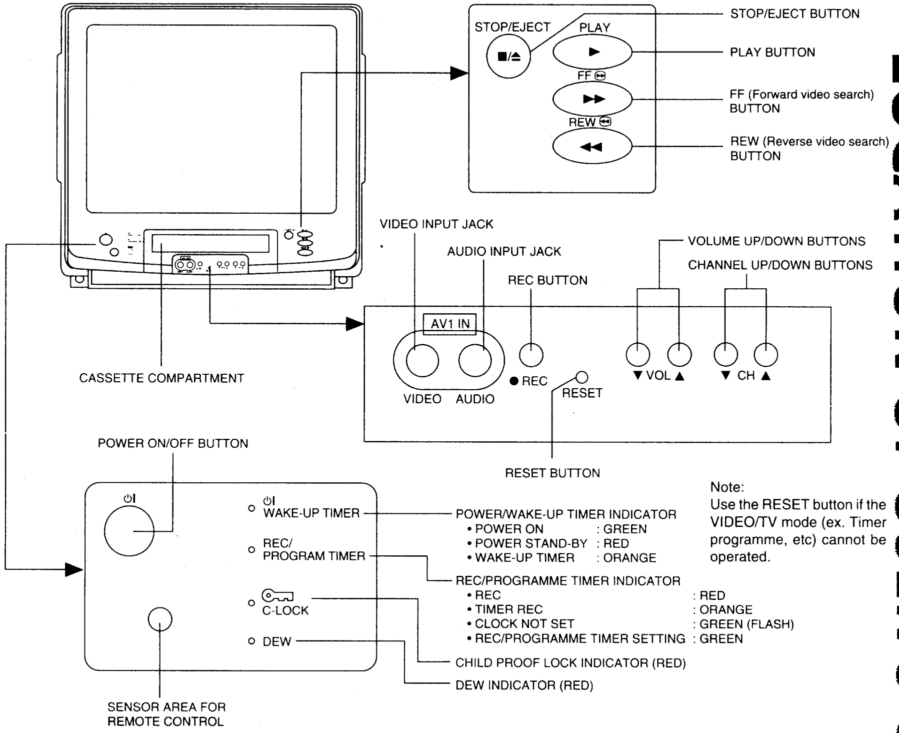
NOTE:
Aerial Connections


COAXIAL CABLE 75Ω

75 OHM COAXIAL CABLE:
Connect the cable from the aerial to a new standard DIN 45325 plug (IEC 169-2) and plug direct into the socket at the rear of the TELEVIDEO.

Description of Controls (VT-5400S)

FRONT


STOP/EJECT
PLAY
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STOP/EJECT BUTTON
PLAY BUTTON
FF (Forward video search) BUTTON
REW (Reverse video search) BUTTON
VIDEO INPUT JACK
AUDIO INPUT JACK
REC BUTTON
VOLUME UP/DOWN BUTTONS
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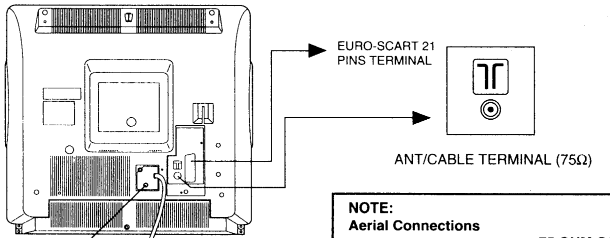
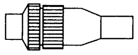
AV1 IN
VIDEO
AUDIO
● REC
RESET
▼ VOL ▲
▼ CH ▲
CASSETTE COMPARTMENT
POWER ON/OFF BUTTON
RESET BUTTON
WAKE-UP TIMER
REC/ PROGRAM TIMER
C-LOCK
DEW
POWER/WAKE-UP TIMER INDICATOR
• POWER ON : GREEN
• POWER STAND-BY : RED
• WAKE-UP TIMER : ORANGE
REC/PROGRAMME TIMER INDICATOR
• REC : RED
• TIMER REC : ORANGE
• CLOCK NOT SET : GREEN (FLASH)
• REC/PROGRAMME TIMER SETTING : GREEN
CHILD PROOF LOCK INDICATOR (RED)
DEW INDICATOR (RED)
SENSOR AREA FOR REMOTE CONTROL

Note:
Use the RESET button if the VIDEO/TV mode (ex. Timer programme, etc) cannot be operated.

REAR


EURO-SCART 21 PINS TERMINAL
ANT/CABLE TERMINAL (75Ω)
MAIN POWER BUTTON
AC POWER CORD

NOTE:
Aerial Connections

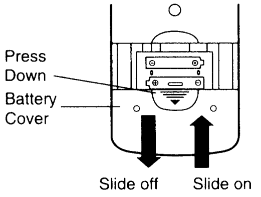

COAXIAL CABLE 75Ω

75 OHM COAXIAL CABLE:
Connect the cable from the aerial to a new standard DIN 45325 plug (IEC 169-2) and plug direct into the socket at the rear of the TELEVIDEO.

LOCATION OF USER'S CONTROL (Continued)

Remote Control Battery Installation (VT-3700S)

■ **Before using the TELEVIDEO, prepare the Remote Control.**
To activate the Remote Control, batteries must first be inserted into the Remote Control.



(1) Press down on the ⩸ mark, and slide the battery cover off as shown.
(2) Insert the batteries, matching their polarities (⊕ and⊖), to the markings inside the Remote Control.
(3) Slide the cover back on.
If the Remote Control does not operate or fails to function normally, replace the batteries. The Remote Control operates on two "AAA" 1.5 volt batteries, available at electronics and camera stores.

Remote Control Battery Installation (VT-5400S)

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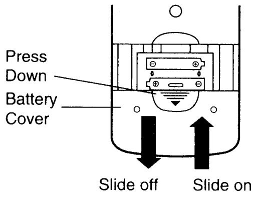
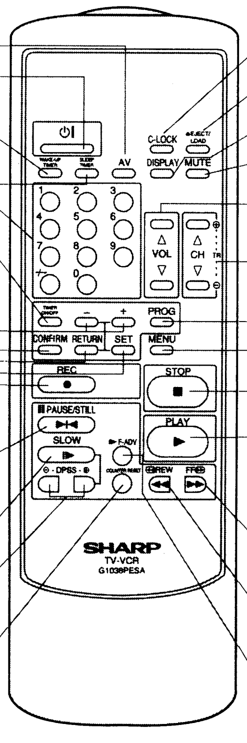
To activate the Remote Control, batteries must first be inserted into the Remote Control.



(1) Press down on the ⩸ mark, and slide the battery cover off as shown.
(2) Insert the batteries, matching their polarities (⊕ and⊖), to the markings inside the Remote Control.
(3) Slide the cover back on.
If the Remote Control does not operate or fails to function normally, replace the batteries. The Remote Control operates on two "R03(AAA)" 1.5 volt batteries, available at electronics and camera stores.

Location of Controls (VT-3700S)



AV button

POWER ON-OFF button

WAKE-UP TIMER button

SLEEP TIMER button

CHANNEL SELECT buttons

TIMER ON/OFF button

–, + buttons

CONFIRM button:
- Used to confirm the programmable setting.

RETURN button

SET button

REC button:
- Used to record a programme.

PAUSE/STILL button:
- Used to temporarily stop the tape during recording mode.
- Used to display a still picture during playback mode.

SLOW button:
- Used to slow motion playback.

SLOW(⊖, ⊕)/DPSS(⊖, ⊕) buttons:
- Used for variable slow playback during slow mode.
- Used to enter the DPSS mode.

COUNTER RESET button:
- Used to reset the tape counter when the tape is loaded.

CHILD LOCK button:
- Used to lock any selected mode.

EJECT/LOAD button:
- Used to eject or load a cassette tape.

DISPLAY button:
- Used to change the On Screen Display.

MUTE button
Press ‣ mute sound.
Press again ‣ restores sound to previous level.

VOLUME UP-DOWN buttons

CHANNEL UP-DOWN buttons (TRACKING ⊕/⊖ buttons):
- Used to adjust the TRACKING while playing the tape.

PROGRAMME button:
- Used to set the programme recording timer.

MENU button:
- Used to select the menu screen.

STOP button:
- Used to stop the tape.

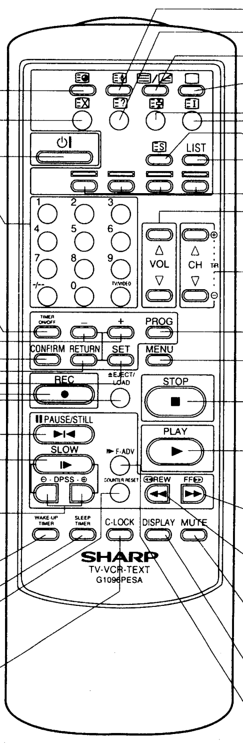
PLAY button:
- Used for tape playback.
- Used to cancel the PAUSE/STILL mode and return to normal playback operation.

FF (Forward Video Search) button:
- Used to fast forward the tape or to conduct Forward Video Search during Playback mode.

REW (Reverse Video Search) button:
- Used to rewind the tape or to conduct Reverse Video Search during Playback mode.

F. ADV. button:
- Used to frame advance during still mode.

Location of Controls (VT-5400S)



CLOCK button in teletext

CANCEL button in teletext

POWER ON-OFF button

CHANNEL SELECT buttons

TIMER ON/OFF button

–, + buttons

CONFIRM button:
- Used to confirm the programmable setting.

RETURN button

SET button

REC button:
- Used to record a programme.

EJECT/LOAD button:
- Used to eject or load a cassette tape.

PAUSE/STILL button:
- Used to temporarily stop the tape during recording mode.
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- Used for variable slow playback during slow mode.
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WAKE-UP TIMER button

SLEEP TIMER button

COUNTER RESET button:
- Used to reset the tape counter when the tape is loaded.

CHILD LOCK button:
- Used to lock any selected mode.

HALF PAGE button in teletext

REVEAL button in teletext

TEXT/MIX button in teletext

TV button in teletext

HOLD button in teletext

INDEX button in teletext

STORE button in teletext

LIST buttons in teletext

COLOUR button in teletext (Red, Green, Yellow, Blue)

VOLUME UP-DOWN buttons

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MUTE button
Press ‣ mute sound.
Press again ‣ restores sound to previous level.

DISPLAY button:
- Used to change the On Screen Display.

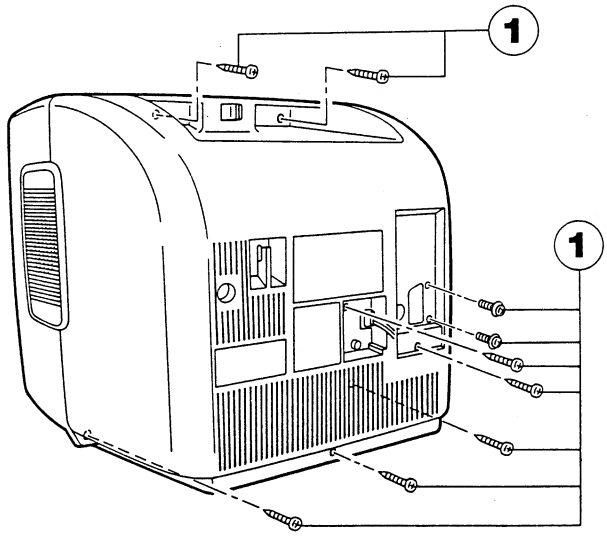
F. ADV. button:
- Used to frame advance during still mode.

DISASSEMBLY AND REASSEMBLY

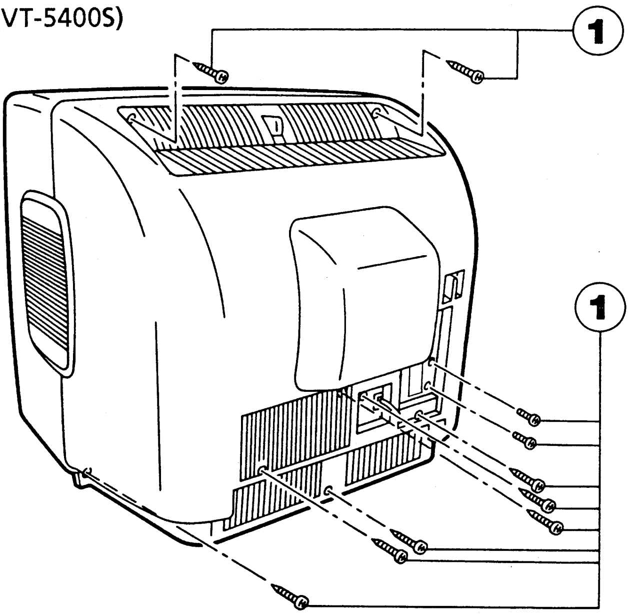
■ TV SECTION

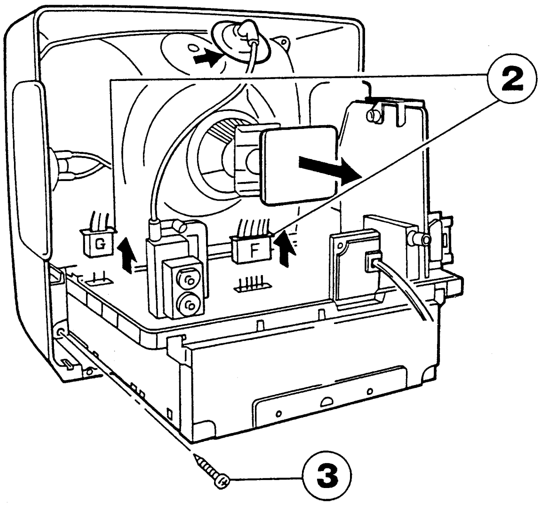
1. Remove the nine screws off the rear cover. (VT-3700S)
1. Remove the ten screws off the rear cover. (VT-5400S)
2. Disconnect the F and G connectors from the main PWB.
3. Remove the screws off the video unit and take out the unit.
4. Remove the two screws from the main PWB and separate the PWB from the video unit.

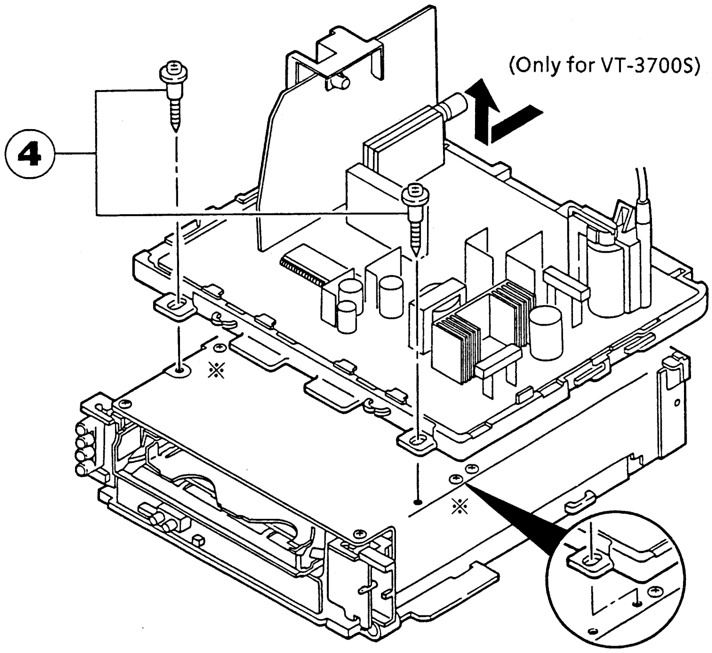
(VT-3700S)



(VT-5400S)







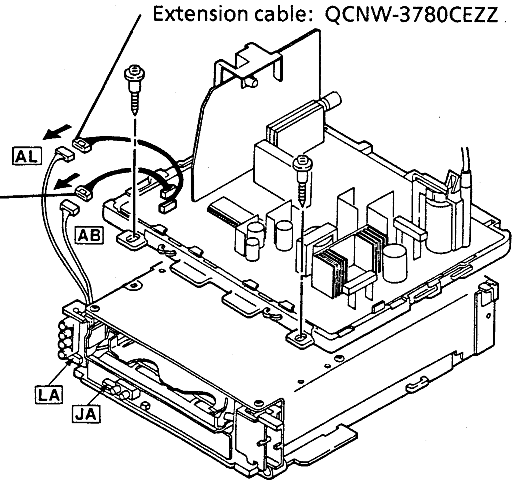
※(Only for VT-5400S)

DISASSEMBLY AND REASSEMBLY (Continued)

■ CONNECTIONS FOR SERVICING

Use the following extension cables in servicing the VCR unit taken out of the set.
Extension cables: Part codes QCNW-3778CEZZ, QCNW-3780CEZZ

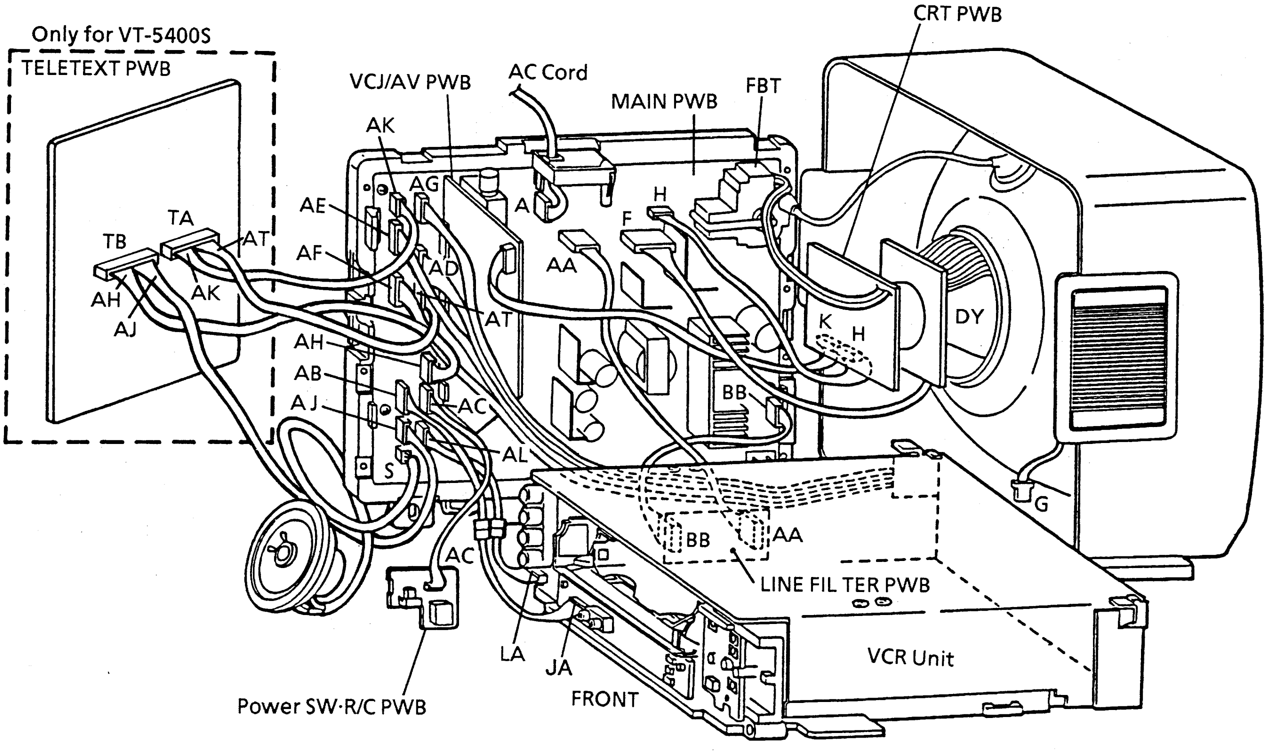
- Connecting the extension cables
  (1) Between AB (TV unit) and JA (AV jack):
  Connect the cable QCNW-3778CEZZ between the AB plug and the AB socket.
  (2) Between AL (TV unit) and LA (LED unit):
  Connect the cable QCNW-3780CEZZ between the AL plug and the AL socket.



Extension cable: QCNW-3780CEZZ

Extension cable: QCNW-3778CEZZ

5. Remove the CRT PWB, degaussing coil connector G, and front power switch remote control PWB. Place the main PWB upright.
6. Reconnect the CRT PWB. Put the main PWB and the VCR unit together as shown below. Keep the front power switch remote control PWB, speakers and degaussing coil connector G off position.


Only for VT-5400S
TELETEXT PWB
TB
TA
AT
AH
AK
AJ
VCJ/AV PWB
AK
AC Cord
MAIN PWB
FBT
CRT PWB
AE
AG
A
H
F
AF
AD
AA
AT
K
H
DY
AH
AB
AJ
AC
BB
AL
S
G
BB
AA
AC
LINE FIL TER PWB
VCR Unit
LA
JA
FRONT
Power SW·R/C PWB

ADJUSTMENT OF THE TV ELECTRICAL CIRCUITRY

VIDEO/CHROMA ADJUSTMENT

Adjusting Conditions | **Adjusting Procedures**

1. CRT Cut-off Adjustment

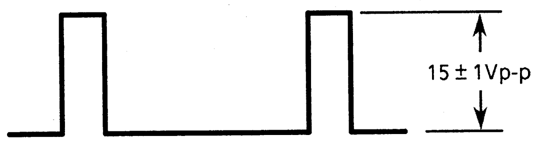
Adjusting Point

☐ **R853: Red Bias control**
☐ **R859: Green Bias control**
☐ **R865: Blue Bias control**
☐ **T602: Screen control (a part of T602)**
☐ **R857: Green Drive control**
☐ **R863: Blue Drive control**

Note:
Prior to this adjustment, warm up the unit with the beam current of more than 600 μA (VT-3700S) / 700 μA (VT-5400S) for more than 30 minutes.

1. Receive "MONOSCOPE PATTERN" signal with pattern generator.
2. Set Red bias control at MIN (0/10) position.
   Set Green bias control at MIN (0/10) position.
   Set Blue bias control at MIN (0/10) position.
   Set Green drive control at CENTER (5/10) position.
   Set Blue drive control at CENTER (5/10) position.
3. Set the control at the position that Contrast is MAX (60), Colour is CENTER (0) an Brightness is CENTER (VT-3700S -14, VT-5400S -11) using control, "Λ" and "V" keys.
4. Set the Screen control at MIN (0/10) position.
5. Turn on S1401 (Service switch) at the horizontal line position.
6. Connect the oscilloscope to TP852 (Red Cathode).

1. Adjust the Sub-Brightness control (R425) so that the blanking pulse on oscilloscope is 15 ± 1Vp-p.



2. Slowly turn the Screen control clockwise and stop it where the horizontal raster appears slightly, in one of the three colours.
3. Carefully adjust the Bias controls of the other two colours until the horizontal raster becomes white.
4. Turn the Screen control counterclockwise until the horizontal raster disappears, and stop it.

VIDEO/CHROMA ADJUSTMENT (Continued)

2. White Balance and Back Ground Adjustment

Adjusting Conditions	Adjusting Procedures
Adjusting Point ☐ **R857: Green Drive control** ☐ **R863: Blue Drive control** ☐ **R421: Sub-Contrast control** ***Note:*** ***Prior to this adjustment, warm up the unit with the beam current of more than 600 μA (VT-3700S) / 700 μA (VT-5400S) for more than 30 minutes.*** 1. Receive "MONOSCOPE PATTERN" signal with pattern generator. 2. Set the Contrast and Brightness controls at MAX position. 3. Connect beam ammeter to TP601 and TP602. (Full scale: 3 mA)	1. Adjust the Sub-Contrast control so that the beam current becomes 0.75 mA (VT-3700S) / 0.95 mA (VT-5400S) (rough adjustment). 2. Adjust the Green Drive control and Blue Drive control so that the colour temperature is at X = 0.290, Y = 0.284. ● High beam: 0.75 mA (VT-3700S) 0.95 mA (VT-5400S) 3. Adjust the Contrast control and Brightness control so that the beam current is approx. 200μA, and check that the colour temperature is at X = 0.290. If the temperature is not at Y = 0.284, go back to **"CRT CUT-OFF ADJUSTMENT"** and repeat the adjustment.

3. Sub-Contrast Adjustment

Adjusting Conditions	Adjusting Procedures
Adjusting Point ☐ **R421: Sub-Contrast control** ***Note:*** ***Prior to this adjustment, warm up the unit with the beam current of more than 600 μA (VT-3700S) / 700 μA (VT-5400S) for more than 30 minutes.*** 1. Receive "MONOSCOPE PATTERN" signal with pattern generator. 2. Set the Contrast and Brightness controls at MAX position. 3. Connect DC milliammeter to TP601⊖ and TP602⊕. (Full scale: 3 mA)	1. Adjust Sub-Contrast control so that the beam current becomes 0.75 mA (VT-3700S) / 0.95 mA (VT-5400S).

VIDEO/CHROMA ADJUSTMENT (Continued)

Adjusting Conditions | **Adjusting Procedures**

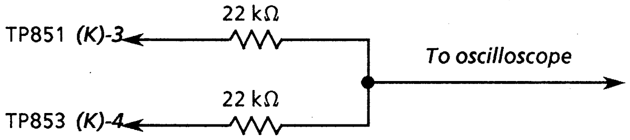
4. PAL Chroma Adjustment

Adjusting Point

- ☐ **R1806: 1H Delay Amp. control**
- ☐ **T1801: 1H Delay Phase control**

Note: Before this adjustment, the PIF/AFT/AGC adjustment must have been completed.

1. Receive "PAL COLOUR BAR" signal with pattern generator.
2. Connect the following resistance matrix to pins 3 and 4 of the connector (K), to which an oscilloscope is connected.



Resistance Matrix

3. Set the Service switch S1401 at the Video Cut position to cut off the Y-signal.

1. Adjust the Colour control key so that the output waveform of colour difference signal becomes 1.5 Vp-p.
2. Adjust R1806 and T1801 so that the output waveform shown in Fig. ***a*** is corrected to that shown in Fig. ***b***.
3. Return S1401 to CENTER (normal position).

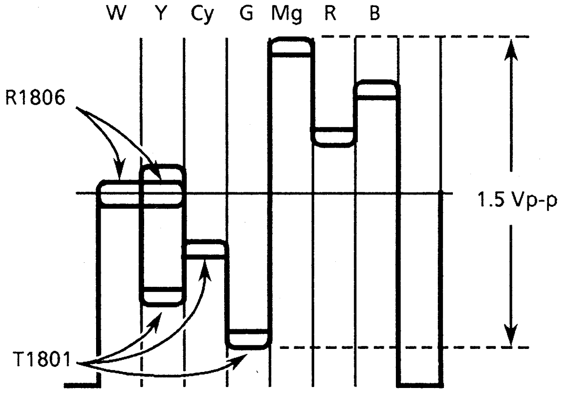


Figure a. Waveform before the adjustment

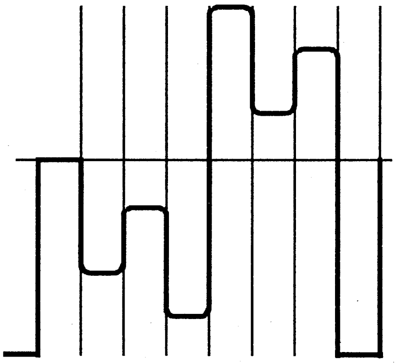


Figure b. Waveform after the adjustment

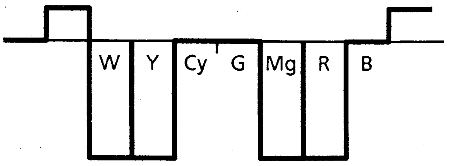
5. PAL Sub-Colour Adjustment

Adjusting Point

- ☐ **R1802: Sub-Colour control**

1. Receive "PAL COLOUR BAR" signal with colour bar generator.
2. Set the control at the "NORMAL" position that Contrast is MAX (60), Colour is CENTER (+5) and Brightness is CENTER (0) using control, "Λ" and "V" keys.
3. Connect oscilloscope to the TP852 (Red cathode).
   - Range: 20V / div.
   - Sweep time: 20μsec / div.

1. For PAL colour bar signal reception, adjust R1802 so that the white output (75%) and red output will have the same level.



DEFLECTION LOOP ADJUSTMENT

Adjusting Conditions	Adjusting Procedures

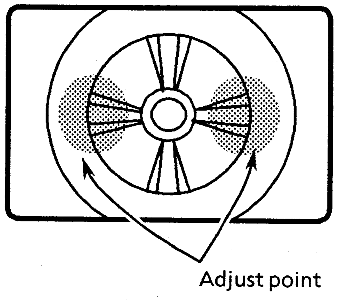
1. Focus Adjustment

• During the adjustment, keep the unit facing the east.

Adjusting Point
☐ **T602: Focus control (a part of T602)**

1. Receive "MONOSCOPE PATTERN" signal.
2. Set the Brightness and Contrast controls at NORMAL position.

1. Adjust Focus control (a part of T602) to have best focus at the central area of CRT.



2. Horizontal Center Adjustment

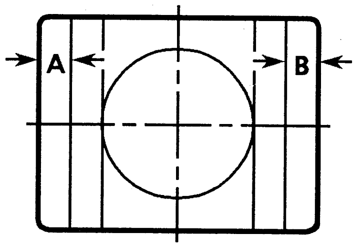
• During the adjustment, keep the unit facing the east.

Adjusting Point
☐ **R1602: Horizontal Center control**

Note: This adjustment should be performed after the purity and convergence adjustments.

1. Receive "MONOSCOPE PATTERN" signal.

1. Adjust R1602 so that the horizontal center of picture is at the position which gives the relation of A = B.



3. Vertical Linearity Adjustment

• During the adjustment, keep the unit facing the east.

Adjusting Point
☐ **R526: Vertical Linearity control**

1. Receive "MONOSCOPE PATTERN" signal.

1. Adjust R526 so that the vertical linearity of picture is at best point.

4. Vertical Size Adjustment

• During the adjustment, keep the unit facing the east.

Adjusting Point
☐ **R503: Vertical Size control**

1. Receive "MONOSCOPE PATTERN" signal.
2. Set the Brightness and Contrast controls at MAX position.

1. Adjust R503 so that the vertical size of picture is at the same size as horizontal size.

• V-SIZE 8% TYP
12% MAX

5. Vertical Centering Adjustment

• During the adjustment, keep the unit facing the east.

Adjusting Point
☐ **S501: Vertical Center Adjust switch**

Note: This adjustment should be performed after the purity and convergence adjustments.

1. Receive "MONOSCOPE PATTERN" signal.

1. Adjust S501 so that the picture's vertical center is idential to CRT geometrical vertical center.

ADJUSTMENT OF THE IF CIRCUIT

Adjustment of the RF AGC

Measuring instrument	Oscilloscope Signal generator
Mode	EE
Input signal	Colour bar signal
Test point	TP201 ③ (GND) TP201 ① (Video Output)
Adjusting point	VR001 (AGC control)

1. Receive the colour bar signal (input field strength: 80 dBμ).
2. Observe the video output terminal waveform on the oscilloscope. Adjust VR001 (AGC control) in the IF pack until the noise disappears from the oscilloscope screen and the waveform nearly comes into sync.

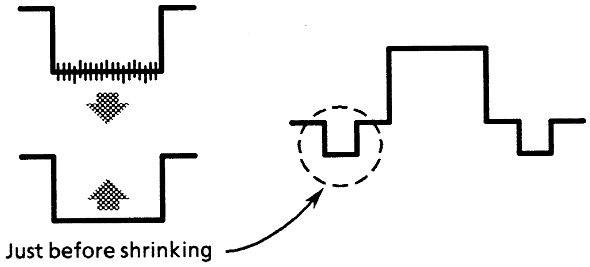


Figure 1.

Adjustment of the AFT

Measuring instrument	Oscilloscope Signal generator
Mode	EE
Input signal	PIF frequency uniwave Colour bar signal (70 dBμ)
Test point	TP201 ③ (GND) TP201 ① (Video Output)
Adjusting point	T002 (AFT coil)
Specification	———

1. Receive the colour bar signal (input field strength: 70 dBμ).
2. Using the signal generator, feed the PIF frequency (38.9 MHz) signal (sinewave) to the tuner IF output terminal.
3. Set the tuning switch to the VHF or UHF position. Keep the tuning button (+) or (−) depressed until the beating on the oscilloscope screen be minimum.
4. Set the tuning switch on the normal position. Adjust T002 (AFT coil) so that beating on the oscilloscope screen be minimum.

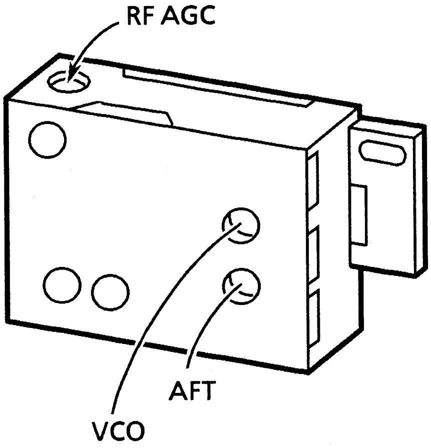
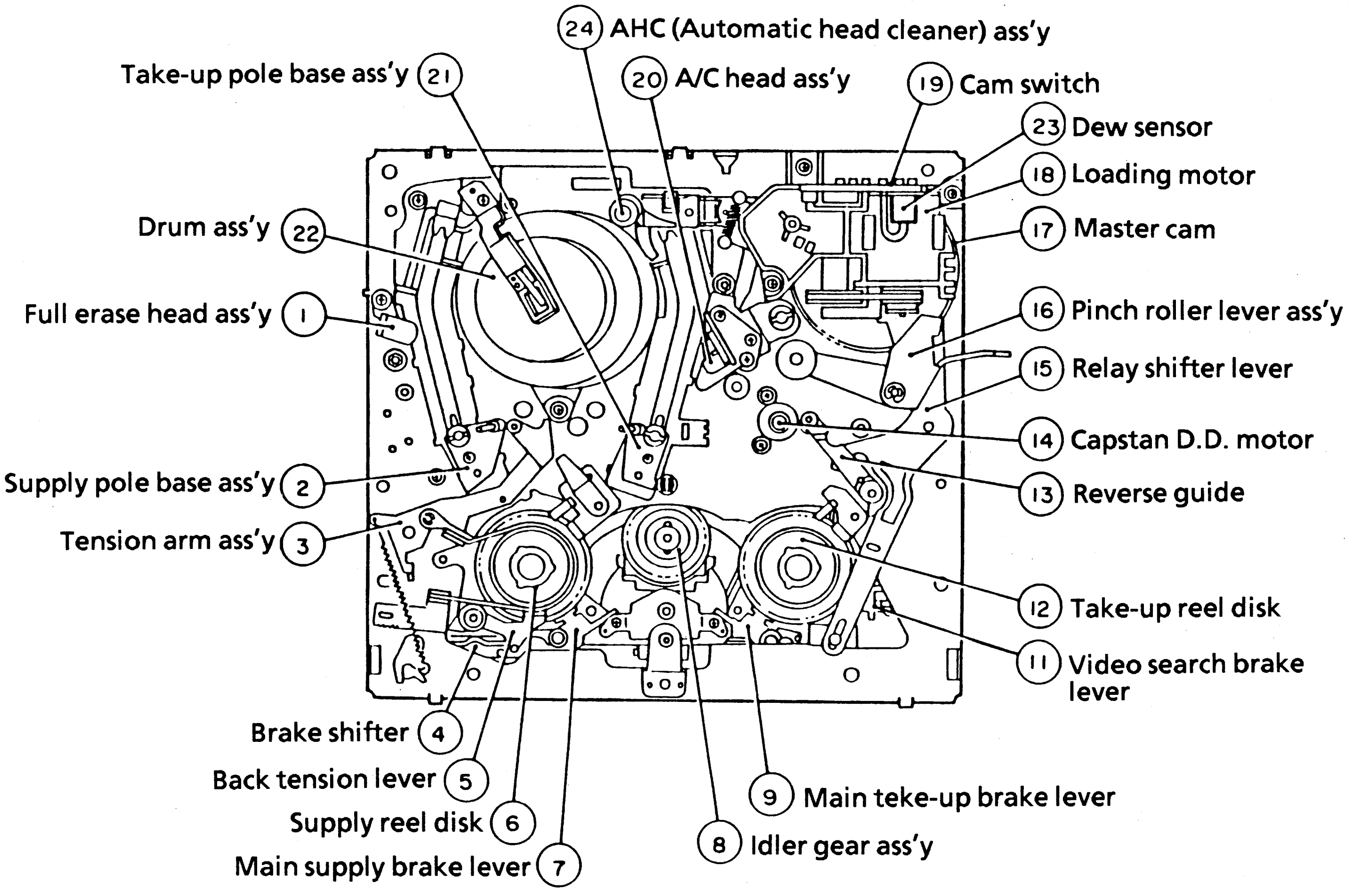


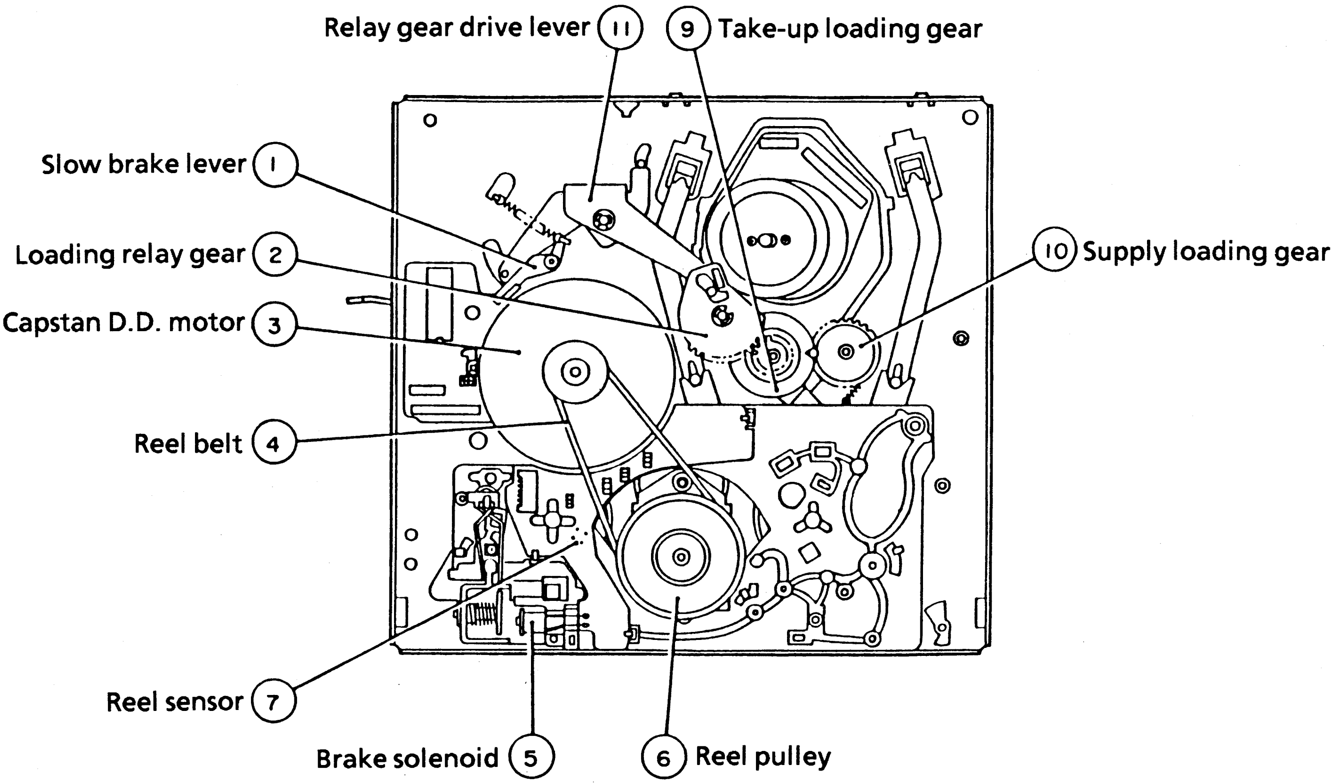
Figure 2. IF Pack

FUNCTION OF MAJOR MECHANICAL PARTS (TOP VIEW)


㉔ AHC (Automatic head cleaner) ass'y
Take-up pole base ass'y ㉑
⑳ A/C head ass'y
⑲ Cam switch
㉓ Dew sensor
⑱ Loading motor
⑰ Master cam
Drum ass'y ㉒
Full erase head ass'y ①
⑯ Pinch roller lever ass'y
⑮ Relay shifter lever
⑭ Capstan D.D. motor
Supply pole base ass'y ②
⑬ Reverse guide
Tension arm ass'y ③
⑫ Take-up reel disk
⑪ Video search brake lever
Brake shifter ④
Back tension lever ⑤
Supply reel disk ⑥
Main supply brake lever ⑦
⑨ Main teke-up brake lever
⑧ Idler gear ass'y

No.	Function	No.	Function
1.	Full erase head ass'y Erase the whole records on the tape in the recording mode.	13.	Reverse guide Pulls out the tape in the video search rewind mode, and controls the tape drive train height with the upper and lower guides.
3.	Tension arm ass'y Detects the tension of tape while running, and brakes the supply reel disk via the tension band.	15.	Relay shifter lever Transmits the operation of the master cam to the brake shifter, and operates the reverse guide.
4.	Brake shifter Set the position of brake or the like in accordance with the modes such as stop and playback.	16.	Pinch roller lever ass'y Press-fits the tape to the capstan during tape running. The right protrusion switches the clutch of the cassette housing control assembly in "tape eject", and makes the mechanism eject the tape.
5.	Back tension lever Brakes the supply reel disk to a certain degree to prevent tape slackening during "half-loading", "loading" and "shifting from playback to video search rewind".	17.	Master cam Turns clockwise during loading, and counterclockwise during unloading, and moves the shifter or the like in accordance with each mode.
7.	Main supply brake lever Brakes the supply reel disk to prevent tape slackening when the unit is stopped in fast forward or rewind mode.	18.	Loading motor A motive power which drives the mechanism. It transmits the power to the master cam and cassette housing control assembly via the belt.
9.	Main take-up brake lever Brakes the take-up reel disk to prevent tape slackening when the unit is stopped in fast forward or rewind mode.	19.	Cam switch Rotates synchronously with the master cam, and detects the position of each mode by means of the internal switch.
11.	Video search brake lever It is in contact with the take-up reel disk normally, and brakes it to a certain degree. It applies larger brake in the video search rewind mode.	23.	Dew sensor An element which detects condensation inside the unit. This element is activated, when it senses condensation, to interrupt the mechanism.

FUNCTION OF MAJOR MECHANICAL PARTS (BOTTOM VIEW)


Relay gear drive lever ⑪
⑨ Take-up loading gear
Slow brake lever ①
Loading relay gear ②
Capstan D.D. motor ③
⑩ Supply loading gear
Reel belt ④
Reel sensor ⑦
Brake solenoid ⑤
⑥ Reel pulley

No.	Function	No.	Function
1.	Slow brake lever Gets in contact with the capstan D.D. motor linking to the master cam in the slow still mode, and brakes it to a certain degree.	7.	Reel sensor An element which sheds the light onto the reflection plate affixed to the bottom side of the reel disk, and detects the rotation of the reel disk through receiving the reflected light.
3.	Capstan D.D. motor A motive power which runs the tape. It transmits the power via the reel belt.	9.	Take-up loading gear Shifts the take-up pole base and guide roller via the loading relay gear, and applies the tape around the durm assembly, as well as transmits the power to the supply loading gear.
4.	Reel belt Transmits the power to run the tape to the reel pulley.		
5.	Brake solenoid Adsorbs and holds the brake shifter in the fast forward and rewind modes, and releases it in the stop mode.	10.	Supply loading gear Shifts the supply pole base and guide roller via the take-up loading gear, and applies the tape around the drum assembly.
6.	Reel pulley Transmits the power of the capstan D.D. motor to the reel disk via the reel idler.	11.	Relay gear drive lever Transmits the movement of the master cam to the take-up loading gear via the loading relay gear.

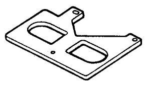
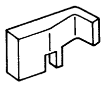
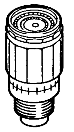
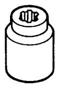
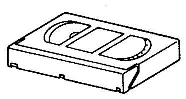
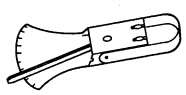
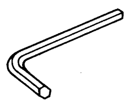
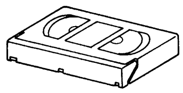
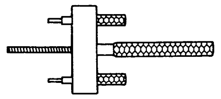
ADJUSTMENT, REPLACEMENT AND ASSEMBLY OF MECHANICAL UNITS

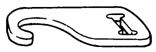
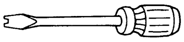
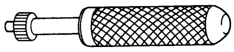
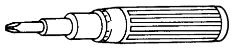
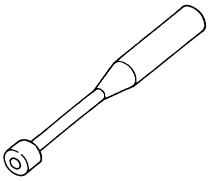
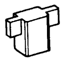
Here we will describe a relatively simple service work in the field, not referring to the more complicated repairs which would require the use of special equipment and tools (drum assembly replacement, for example).

We are sure that the easy-to-handle tools listed below would be more than handy for periodical maintenance to keep the machine in its original working condition.

TOOLS NECESSARY FOR ADJUSTING THE MECHANICAL UNITS

The following tools are required for proper service and satisfactory repair.

No.	Jig Item	Part No.	Code	Configuration	Remarks
1	Reel Disk Height Adjusting Jig	JiGRH0002	BR		These Jigs are used for checking and adjusting the reel disk height
2	Master Plane Jig	JiGMP0001	BY		
3	A/C Head Tilt Adjusting Jig	JiGACH-F18	BU		This Jig is used for setting the A/C head tilt.
4	Torque Gauge (90g)	JiGTG0090	CM		These Jigs are used for checking and adjusting the torque of take-up and supply reel disks.
	Torque Gauge (1.2 kg)	JiGTG1200	CN		
5	Gauge Head	JiGTH0006	AW		
6	Cassette Torque Meter	JiGVHT-063	CZ		This cassette torque meter is used for checking and adjusting the torque of take-up for measuring tape back tension.
7	Tension Gauge (300g)	JiGSG0300	BF		There are two gauges used for the tension measurements, 300 g and 2.0 kg.
	Tension Gauge (2.0kg)	JiGSG2000	BS		
8	Hex Wrench (0.9mm)	JiGHW0009	AE		These Jigs are used for loosening or tightening special hexagon type screws.
	Hex Wrench (1.2mm)	JiGHW0012	AE		
	Hex Wrench (1.5mm)	JiGHW0015	AE		
9	Alignment Tape (PAL)	VROCPSV	CD		This tape is especially used for electrical fine adjustment.
	Alignment Tape (NTSC)	VROATSV VRONBZGS	CD		
10	Drum Replacing Jig	JiGDT-0001	BG		This is used for replacement of the VCR's upper drum.

No.	Jig Item	Part No.	Code	Configuration	Remarks
11	Tension Gauge Adapter	JiGADP003	BK		This Jig is used with the tension gauge. Rotary transformer clearance adjusting jig.
12	Special Bladed Screwdriver	JiGDRiVERH-4	AP		This screwdriver is used for adjusting the guide roller height.
13	Tension Band and Plate Adjusting Jig	JiGDRiVER-6	BM		This Jig is used for adjusting the tension band and tension plate.
14	Torque Driver	JiGTD1200	CB		This is used to screw down resin-made parts: the specified torque is 5 kg.
15	Box Driver	JiGDRiVER110-7	AS		This Jig is used for height adjustment of the A/C head and X-position.
		JiGDRiVER110-4	AV		This Jig is used for height adjustment of the retaining guide.
16	Reverse Guide Height Adjusting Jig	JiGRVGH-F18	BU		This Jig is used for height adjustment of the reverse guide.

MECHANICAL PARTS REQUIRING PERIODICAL INSPECTION

Use the following table as a guide to maintain the mechanical parts in good operating condition.

Maintained Parts	500 hrs.	1000 hrs.	1500 hrs.	2000 hrs.	Possible symptom encountered	Remarks
Guide roller ass'y	□	□	□	○	Lateral noises Head occasionally blocked	Abnormal rotation or significant vibration requires replacement.
Supply impedance roller	□	□	□	○		
Supply impedance roller (inner hole and shaft)		□		□		Clean with pure high quality isopropyl alcohol.
Supply impedance roller flange	□	□	□	□		Clean tape contact part with the specified cleaning liquid.
Retaining guide	□	□	□	□		
Slant pole	□	□	□	○		
Video head (upper drum ass'y)	□	○ □	□	○ □	Poor S/N ratio, no color	Clean tape contact area with the specified cleaning liquid.
Full-erase head	□	□	□	○	Poor colour, beating	
A/C head	□	□	□	○	Sound too small or distorted	
Lower drum ass'y	□	□	□	○	Poor flatness of the envelope with alignment tape	
Capstan D.D. Motor	□	□	□	○	No tape running, uneven color	
Pinch roller	□	□	□	○	No tape running, tape slack	Clean rubber and rubber contact area with the specified cleaning liquid.
Reel belt		□		○	No tape running, tape slack, no fast forward/rewind motion	
Loading belt		□		○	Cassette not loaded or unloaded	
Cassette loading belt		□		○		
Tension band ass'y				○	Lateral image swing	
Loading Motor				○	Cassette not loaded or unloaded	
AHC (Automatic Head Cleaner)		○		○		Replace the roller of the cleaner when it wears down. Just change the AHC roller assembly for new one.
Reel block*					See the chart below.	
*** See the table below for servicing the reel block parts.**						
Supply/Take-up reel disks		□ △		△ ○	No tape running, tape slack	Clean with pure high quality isopropyl alcohol.
Video search brake lever				○		
Idler gear ass'y				○	No tape running	
Reel Pulley		□ △		□ ○		
Main supply/take-up brake levers				○	Tape slack	

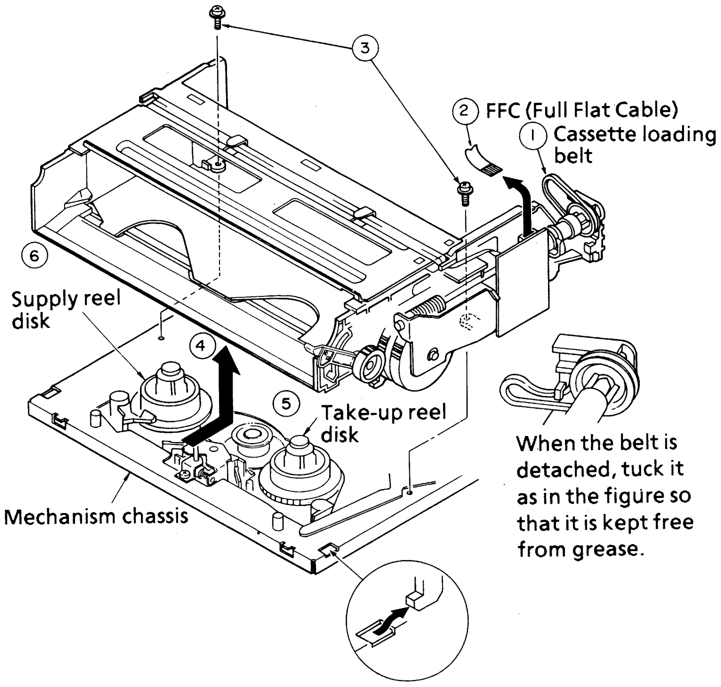
NOTE: ○: Part replacement.
□: Cleaning (For cleaning, use a lint-free cloth dampened with pure isopropyl alcohol).
△: Oil refilling (The indicated point should be lubricated with high quality spindle oil every 1000 hrs).

If the reading is out of the specified value, clean or replace the part.

REMOVAL AND REASSEMBLY OF CASSETTE HOUSING CONTROL ASSEMBLY

- **Removal**

1. Set the cassette ejected condition in the cassette eject mode.
2. Unplug the recorder from the main source.
3. Follow the procedures below in the specified order.
   a) Remove the cassette loading belt ①.
   b) Disconnect the FFC (Full Flat Cable) ②.
   c) Remove the cassette housing installation screws ③.
   d) Slide and pull out the cassette housing control assembly ④ upward.
4. In removal and reassembly, take care not to hit the cassette housing control assembly or tools against the guide pin, drum, or the like thereabout.
5. Place the unit in the eject mode in removal or reassembly of the cassette housing control assembly.
6. Load the cassette once onto the cassette housing control assembly after reassembly. (If the cassette housing control assembly normally operates after this, the phases of mechanism and the cassette controller are accurately adjusted after ejection.)



When the belt is detached, tuck it as in the figure so that it is kept free from grease.

Insert the tab of the Cassette housing control assembly to the mechanism chassis.

Figure1-1.

- **Reassembly**

1. Before installation of the cassette housing control assembly, place the unit in the stop mode with the power on, then unplug the power cord. (The main body is placed in the eject mode.)
2. Follow the procedures for removal in the reverse order.

Notes:

1. Be sure to unplug the power cord in removal and reassembly.
2. Keep the cassette loading belt free from grease. In case of its adhesion, clean the belt.
3. In using a magnet screw driver, be sure to keep it away from the A/C head, FE (Full Erase) head, or the drum.

MECHANICAL OPERATION CHECK WITHOUT CASSETTE

When power is on, the general operations of the mechanism can be checked without a cassette. Note the following points.

1. Check video search rewind and rewind, rotating the take-up reel disk ⑤ by hand (in either normal or reverse direction). If it is not rotated, the reel sensor works to shift the mechanism to the eject mode.
2. When the stop button is pressed, the mechanism does not stop at a normal stop position. It shifts to the eject mode and stops.
3. When the stop button is pressed in the playback, video search rewind, and video search forward modes, the supply reel disk ⑥ keeps on rotating for several seconds for elimination of tape slack in the course of shifting to the eject mode. In such a case, rotate the take-up reel disk ⑤ somewhat by hand, and the supply reel disk ⑥ stops, which can reduce the working time.

REPLACEMENT OF WORM WHEEL ASSEMBLY

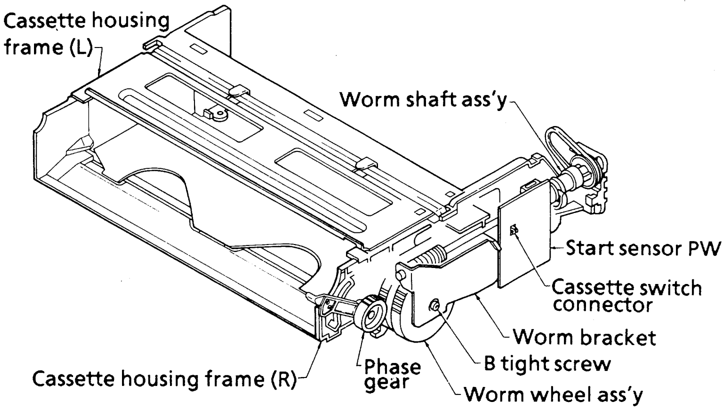


Figure 1-2.

- **Removal**

1. Unsolder the cassette switch connectors (No. 16, 17) from the start sensor PWB.

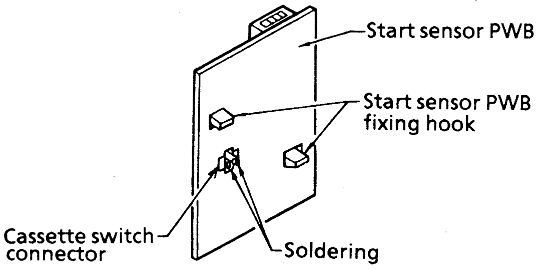

Start sensor PWB
Start sensor PWB fixing hook
Cassette switch connector
Soldering

Figure 1-3.

2. Lift the start sensor PWB pressing the two start sensor PWB fixing hooks inward.

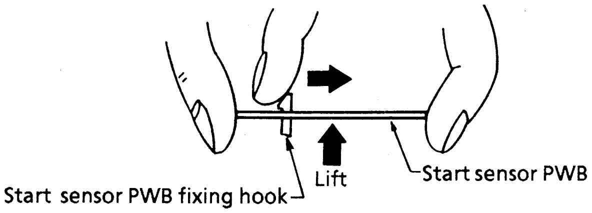

Start sensor PWB fixing hook
Lift
Start sensor PWB

Figure 1-4.

3. Unscrew one B tight screw to detach the worm bracket.
Note:
The worm shaft bearing can easily come out of position. So be careful not to lose it.

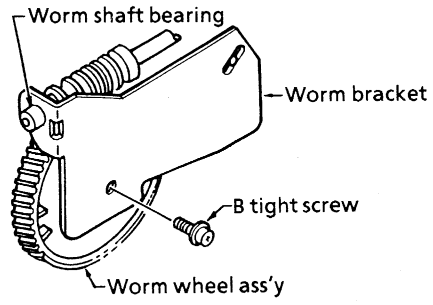

Worm shaft bearing
Worm bracket
B tight screw
Worm wheel ass'y

Figure 1-5.

4. Remove the worm shaft assembly, pulley, and cassette loading belt all from the cassette housing frame (R).

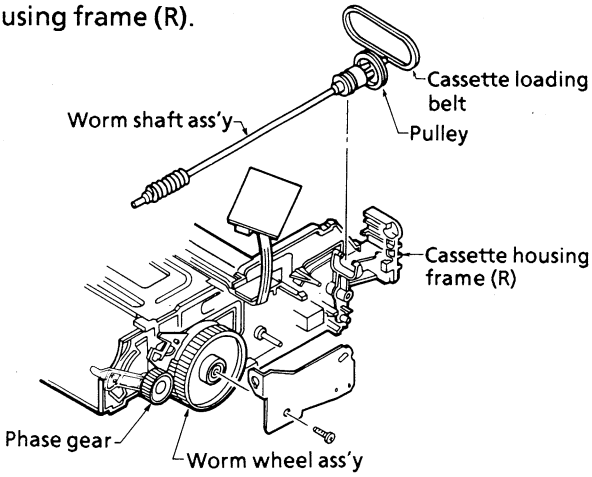

Cassette loading belt
Worm shaft ass'y
Pulley
Cassette housing frame (R)
Phase gear
Worm wheel ass'y

Figure 1-6.

5. Place the slider pin just above the worm wheel assembly (Figure 1-7). (The retainer of the slider is locked at two positions. So unlock it as in the Figure 1-8.)
6. Pull out the worm wheel assembly toward you pressing the switch lever upward. (Figure 1-7)

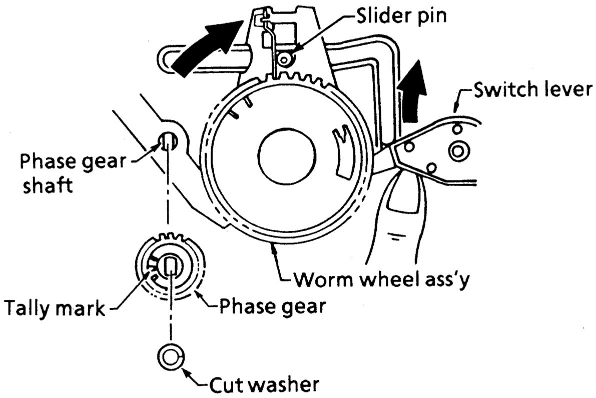

Slider pin
Switch lever
Phase gear shaft
Worm wheel ass'y
Tally mark
Phase gear
Cut washer

Figure 1-7.

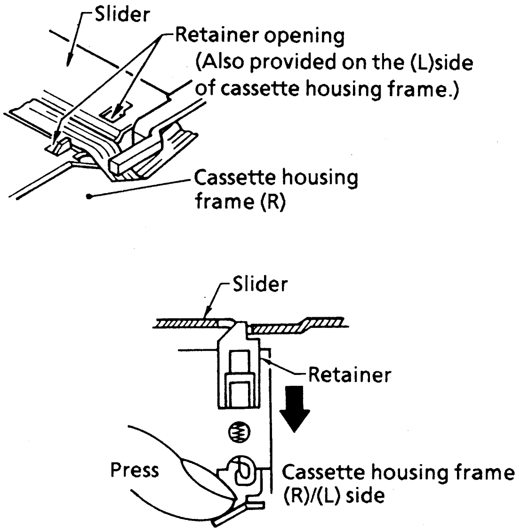
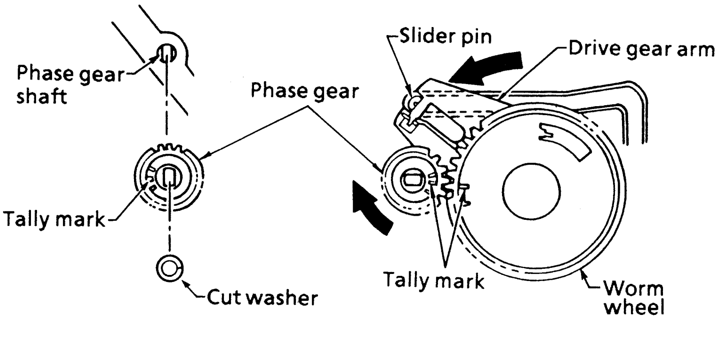

Slider
Retainer opening
(Also provided on the (L)side of cassette housing frame.)
Cassette housing frame (R)
Slider
Retainer
Press
Cassette housing frame (R)/(L) side

Figure 1-8.

- **Reassembly**

1. Turn the phase gear clockwise until the slider comes to a halt in the cassette insertion direction. (See the Figure 1-9.)
2. Insert the set up worm wheel gear assembly into the cassette housing frame (R), matching the mark on the phase gear with the mark on the worm wheel gear. Detach the cut washer on the phase gear assembly and the phase gear for easier installation of worm wheel assembly.
Note:
Make sure that the slider pin is in the groove of the drive gear arm.


Phase gear shaft
Phase gear
Tally mark
Cut washer
Slider pin
Drive gear arm
Tally mark
Worm wheel

(a) (b)

Figure 1-9.

3. Install the pulley and the cassette loading belt on the worm shaft assembly. Couple the clutch to the clutch lever. And mount them together in the cassette housing frame (R).
   Note:
   Keep in mind that the clutch switching lever should be in the correct position. The mechanism might malfunction if the lever is slightly out of position. (See page 22.)

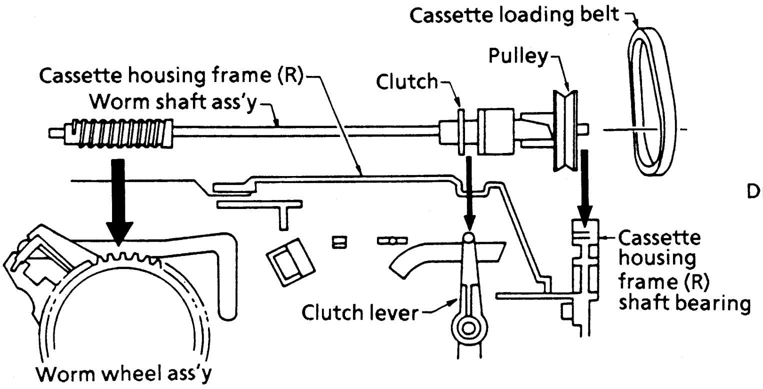

Cassette loading belt
Pulley
Cassette housing frame (R)
Clutch
Worm shaft ass'y
Cassette housing frame (R) shaft bearing
Clutch lever
Worm wheel ass'y

Figure 1-10.

4. Attach the worm bracket to the worm shaft assembly. Place them onto the boss on the cassette housing frame (R).
   Note:
   Insert ① before screwing into ② and ③.

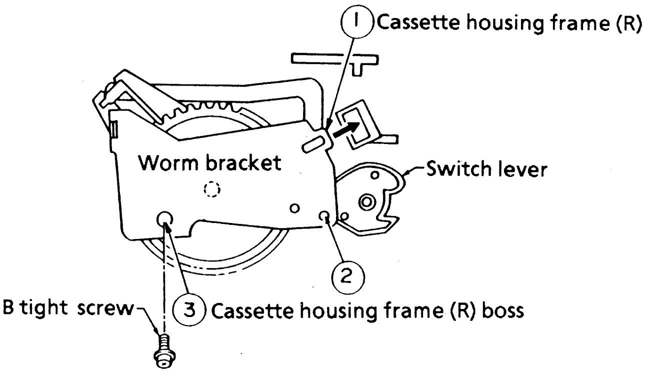
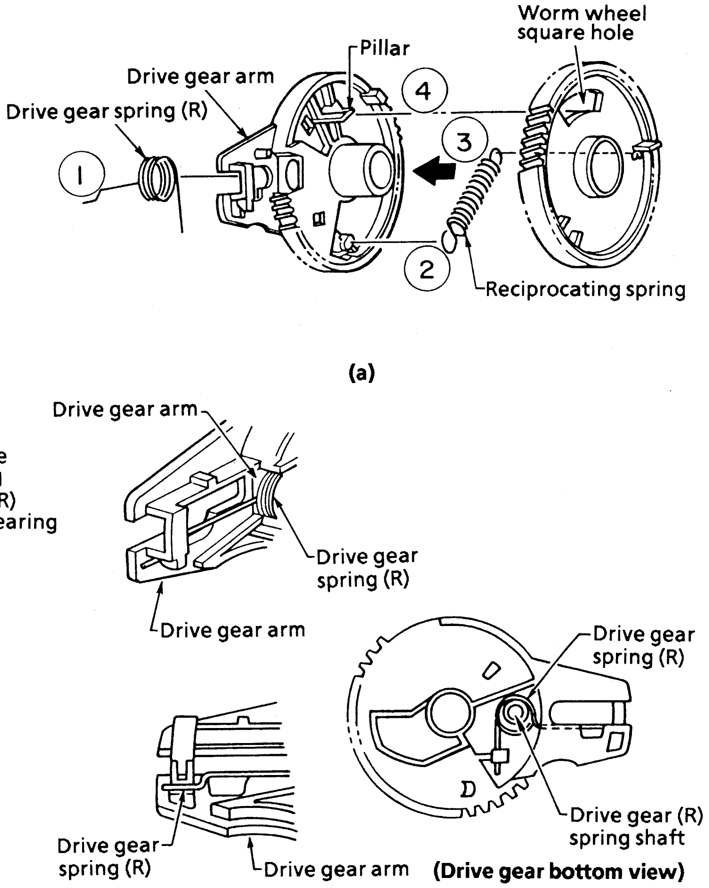

① Cassette housing frame (R)
Worm bracket
Switch lever
②
B tight screw
③ Cassette housing frame (R) boss

Figure 1-11.

5. Tighten one B tight screw.
   Note:
   Do not overtighten the B tight screw (no more than 5.0 ± 0.5 kg·cm), because the lower threads of the screw hole at the resin-made boss can be broken.
6. Place the start sensor PWB on the cassette housing frame (R).
   Note:
   Check that the switch connectors (No. 16, 17) are in the cassette switch mounting hole.
7. Finally resolder the cassette switch connector to the start sensor PWB.

REASSEMBLY OF DRIVE GEAR


Worm wheel square hole
Pillar
Drive gear arm
Drive gear spring (R)
①
④
③
②
Reciprocating spring
(a)
Drive gear arm
Drive gear spring (R)
Drive gear arm
Drive gear spring (R)
Drive gear (R) spring shaft
Drive gear spring (R)
Drive gear arm
(Drive gear bottom view)

(b)

Figure 1-12.

1. Pass the tip of the drive gear spring (R) ① through the square hole of the drive gear (R) to hook the spring in position.
2. Hook one end ② of the reciprocating spring to the catch of the drive gear (R).
3. Hook the other end ③ of the reciprocating spring to the catch of the worm wheel.
4. Insert the pillar ④ of the drive gear (R) into the square hole of the worm wheel. Turn the worm wheel somewhat counterclockwise for insertion of the worm wheel to the drive gear (R), because the reciprocating spring is at work.

REPLACEMENT OF CASSETTE LOADING BELT

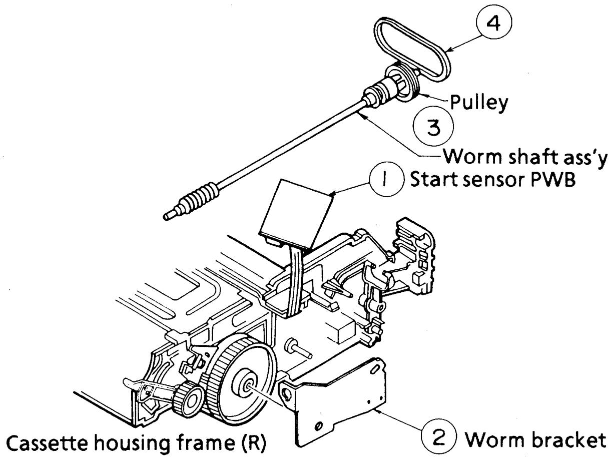

④
Pulley
③
Worm shaft ass'y
① Start sensor PWB
Cassette housing frame (R)
② Worm bracket

Figure 1-13.

1. Remove the start sensor PWB ① and worm bracket ② from the cassette housing frame (R).
2. Remove the worm shaft assembly ③.
3. Replace the cassette loading belt ④ with a new one.

Notes:

1. Do not overtighten the B tight screw which holds the worm bracket in position. The specified torque is 5.0 ± 0.5 kg·cm.
2. Make sure that the cassette loading belt is free from grease. If stained with grease, clean the belt with the cleaning liquid.
3. Perform checking of the clutch switch lever for proper action.

CHECKING THE CLUTCH SWITCH LEVER

- **Checking**

Place the mechanism in the cassette eject mode when removing and attaching the cassette housing from and to the mechanism chassis.

Make sure enough that each part in the cassette housing such as the clutch switch lever is in position. If not, it causes malfunction.

Note:

Figure 1-14 shows the position of each part in the cassette eject mode.

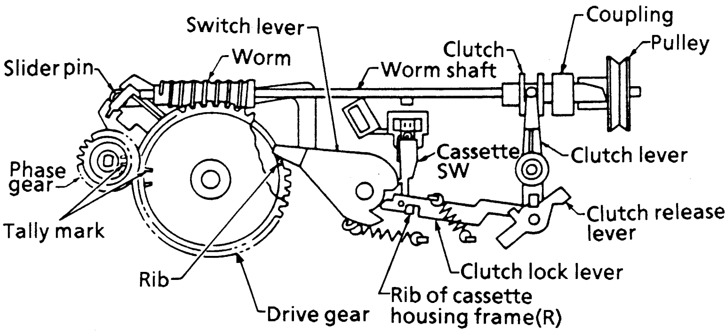
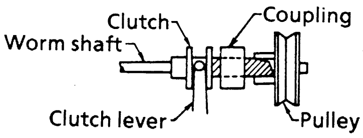

Switch lever
Coupling
Pulley
Clutch
Slider pin
Worm
Worm shaft
Phase gear
Cassette SW
Clutch lever
Clutch release lever
Tally mark
Clutch lock lever
Rib
Rib of cassette housing frame(R)
Drive gear

Figure 1-14.

1. First make sure that the tip of the switch lever is held at the rib of the drive gear (R).
2. Check that the rib of the cassette housing frame (R) and the concavity of the clutch lock lever are engaged.
3. Finally be sure that the relationship between the clutch lever and the clutch, as well as between the clutch and the pulley, are correct as in the Figure 1-15.


Clutch
Coupling
Worm shaft
Clutch lever
Pulley

Check that the clutch is engaged with the pulley through the coupling.

Figure 1-15.

- **Resetting**

Take the following steps to reset the clutch if it is unlocked or if the switch lever and the clutch lock lever are unlocked.

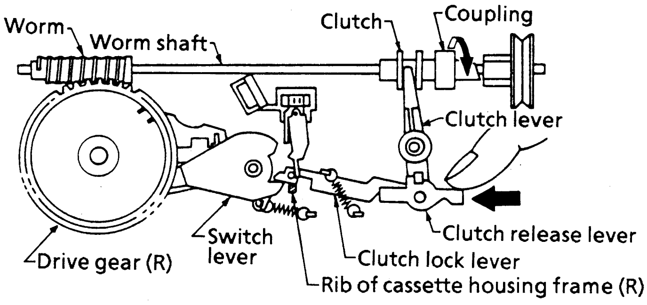

Worm
Worm shaft
Clutch
Coupling
Clutch lever
Clutch release lever
Switch lever
Drive gear (R)
Clutch lock lever
Rib of cassette housing frame (R)

Figure 1-16.

1. Shift the slider by turning the coupling in the arrow direction (clockwise) until the slider pin is at the bottom of the slider groove as shown in the Figure 1-16. (The loading mode)

   Note:

   Note that the slider is equipped with a lock mechanism. Unlock the locks on cassette housing frames (L) and (R) side before shifting the slider.
2. When the position is set as shown in the Figure 4-16, push the clutch release lever in the direction of the arrow by hand until the clutch lock lever becomes tightly locked by the rib of the cassette housing frame (R).
3. Then turn the coupling counterclockwise until the slider reaches the cassette insertion opening and the reciprocating spring is activated.

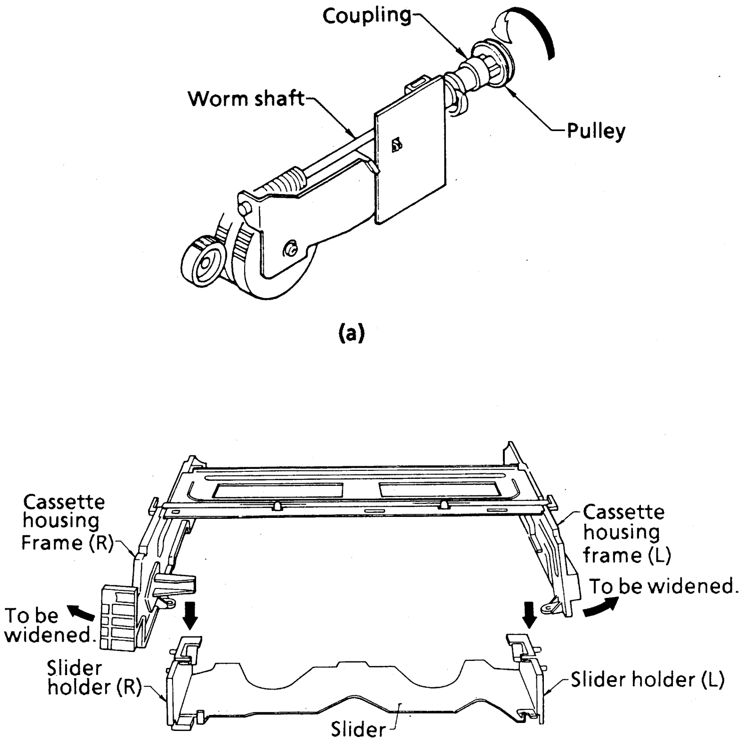
   Note:

   There is no need to unlock the slider when shifting the slider to the cassette insertion opening. Just keep shifting the slider.

REPLACEMENT OF LOCK RELEASE LEVER

- **Removal**

1. Place the slider in the cassette down position. (Turn the coupling on the worm shaft clockwise until the slider is in the cassette down position.)
   Note:
   Before shifting, unlock the slider.
2. Slightly widen the cassette housing frames (R) and (L) to unhook the slider holders (R) and (L) of the slider assembly off the grooves of the cassette housing frames.


Coupling
Worm shaft
Pulley
Cassette housing Frame (R)
Cassette housing frame (L)
To be widened.
To be widened.
Slider holder (R)
Slider holder (L)
Slider

(a)

(b)

Figure 1-17.

3. Lift the slider holder (R) upward about 2mm off the slider by pressing two catches with a thin tip screw driver. Take care not to damage the catches.

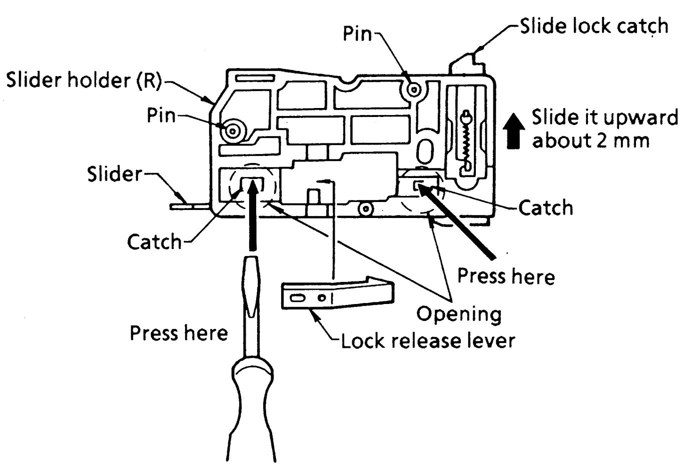

Pin
Slide lock catch
Slider holder (R)
Pin
Slide it upward about 2 mm
Slider
Catch
Catch
Press here
Opening
Press here
Lock release lever

Figure 1-18.

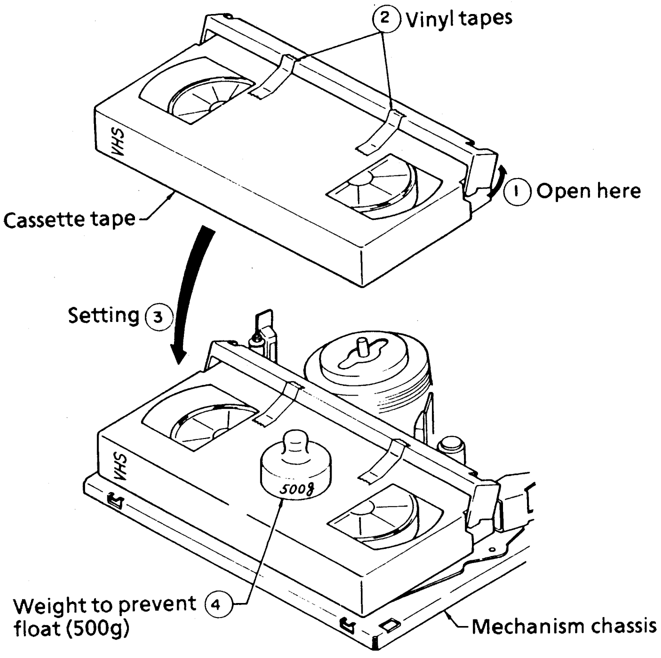
4. Remove the lock release lever from the slider holder (R)

- **Reassembly**

1. Follow the steps for removal in the reverse order. (See Figures 1-17 and 1-18.)
2. Attach the lock release lever to the slider holder (R).
3. Slide the slider holder (R) downward so that the two catches of the slider holder (R) fit the opening of the slider.
4. Slightly widen the cassette housing frames, and set the pins of slider holders (R) and (L) into the grooves of the cassette housing frames.
   Note:
   Check if the pins of the slider holders (R) and (L) fit the grooves of the cassette housing frames, and if the drive gear arm is sufficiently engaged with the slider holders.
5. Turn the coupling counterclockwise until the slider is at the cassette insertion opening.

TO RUN A TAPE WITHOUT THE CASSETTE HOUSING CONTROL ASSEMBLY

1. Plug in the power cord.
2. Turn on the power switch.
3. Open the lid ① of a cassette tape by hand.
4. Hold the lid with two pieces of vinyl tape ②.
5. Set the cassette tape in the mechanism chassis.
6. Stabilize the cassette tape with a weight ④ to prevent floating.
7. Perform running test.


② Vinyl tapes
VHS
① Open here
Cassette tape
Setting ③
VHS
500g
Weight to prevent ④ float (500g)
Mechanism chassis

Note:
The weight should not be more than 500 g.

Figure 1-19.

REPLACEMENT AND HEIGHT CHECKING AND ADJUSTMENT OF REEL DISKS

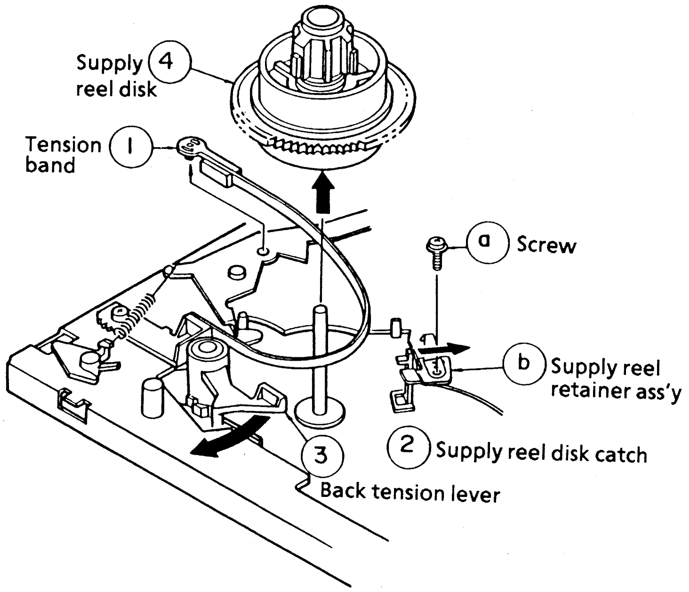
1. Remove the cassette housing control assembly.
2. Set the mechanism in the playback mode with no cassette tape in place. Unplug the power cord.
3. Set the idler gear in the center (neutral).

- **Removal (Supply reel disk)**

1. Remove the tension band ①. (Take care not to deform it.)
2. Unscrew the screw ⓐ and remove the supply reel retainer assembly ⓑ.
3. Release the supply reel disk catch ② and back tension lever ③.
4. Pull the supply reel disk upward.

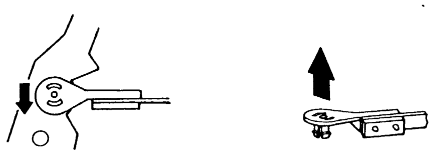
Notes:

1. Take care not to deform the tension band.
2. Check and adjust the tension pole position. (See page 29.)
3. Be careful not to damage the gear and the idler gear on the supply reel disk.
4. Press the tension band in the direction of the arrow for removal (See Figure 1-20(b)).


Supply reel disk
4
Tension band
1
a
Screw
b
Supply reel retainer ass'y
3
2
Supply reel disk catch
Back tension lever

(a)

Note:
When the tension band is pressed in the direction of the arrow for removal, the catch is hard to be deformed.



(b)
Figure 1-20.

- **Removal (Take-up reel disk)**

1. Unscrew the screw ⓒ and remove the take-up reel retainer.
2. Release the take-up reel disk catch ①.
3. Pull the take-up reel disk ② upward.

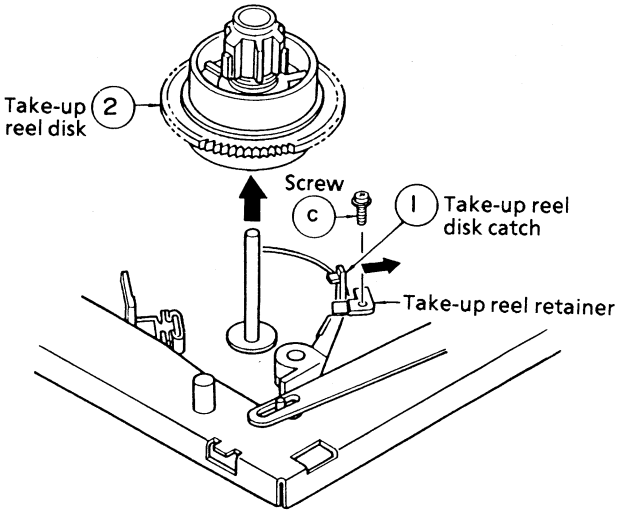

Take-up reel disk
2
Screw
c
1
Take-up reel disk catch
Take-up reel retainer

Figure 1-21.

- **Reassembly (Supply reel disk)**

1. Clean the reel disk shaft ① and apply oil to it.
2. Release the supply reel disk catch ② and back tension lever ③.
3. Install a new supply reel disk ④ onto the shaft.
4. Replace the tension band ⑤ around the supply reel disk, and insert it to the hole of the tension arm.
5. Replace the supply reel retainer assembly ⓑ in place, and tighten up the screw ⓐ.

Notes:

1. Take enough care not to deform the tension band during installation of the supply reel disk.
2. Be careful not to damage the supply reel disk gear, back tension lever, supply reel disk catch, or the like with tools.

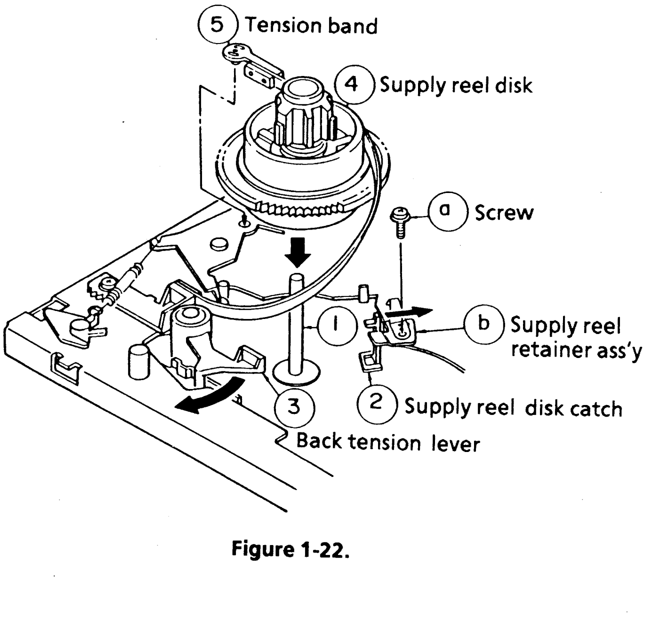
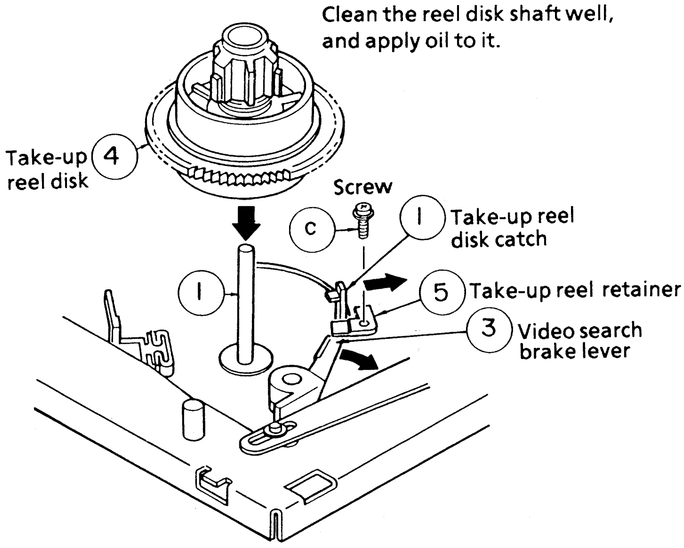

5
Tension band
4
Supply reel disk
a
Screw
1
b
Supply reel retainer ass'y
3
2
Supply reel disk catch
Back tension lever

Figure 1-22.

- **Reassembly (Take-up reel disk)**

1. Clean the reel disk shaft ① and apply oil to it.
2. Release the take-up reel catch ② and video search brake lever ③.
3. Install a new take-up reel disk ④ onto the shaft.
4. Replace the take-up reel retainer ⑤ in position and tighten up the screw ⓒ.

Note:
Take care not to damage the video search brake lever.


Clean the reel disk shaft well, and apply oil to it.
Take-up reel disk 4
Screw
C
1 Take-up reel disk catch
1
5 Take-up reel retainer
3 Video search brake lever

Apply a thin tip driver to the arrow position in releasing for easier setting of the take-up reel disk.

Figure 1-23.

* After reassembly, check the video search rewind back tension (see page 28), and check the brake torque (see page 30).

- **Height checking and adjustment**

Note:
Place the master plane onto the mechanism unit, taking care not to hit the drum (see Figure 1-24).

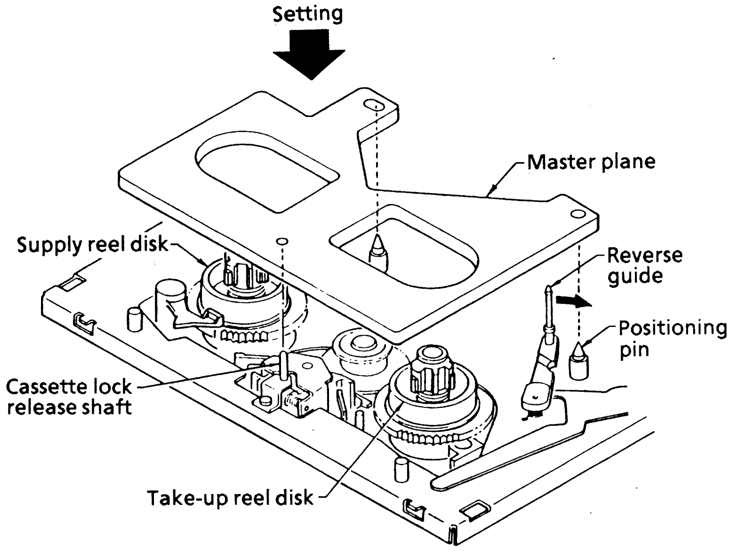

Setting
Master plane
Supply reel disk
Reverse guide
Positioning pin
Cassette lock release shaft
Take-up reel disk

Figure 1-24.

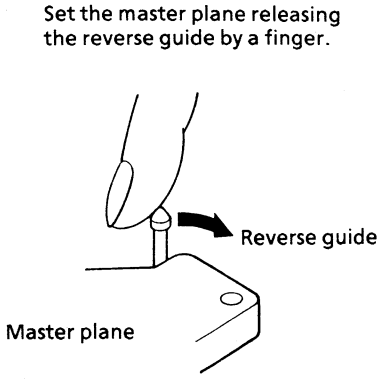
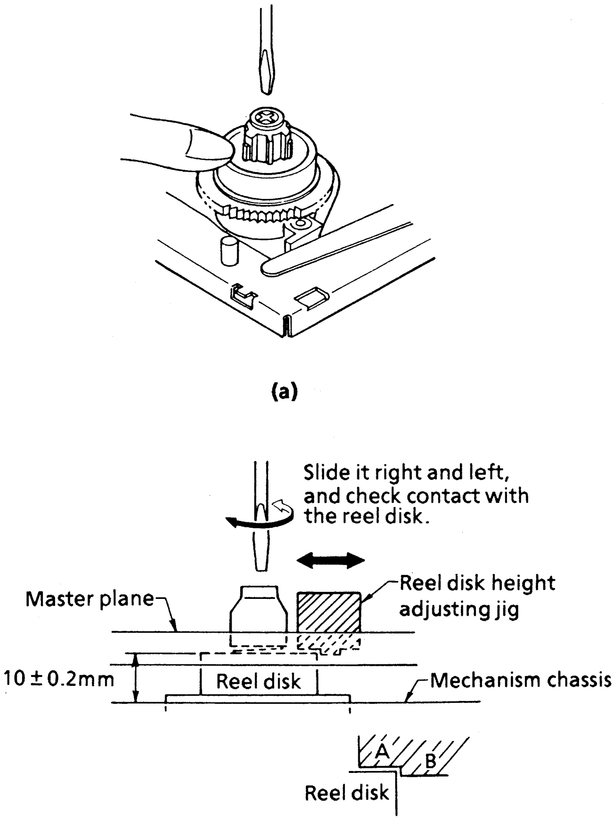

Set the master plane releasing the reverse guide by a finger.
Reverse guide
Master plane

Figure 1-25.

1. For height adjustment, press the reel disk with a finger, and turn it right and left with a screwdriver (see Figure 1-26 (a)).
2. Check that the reel disk is lower than part A but higher than part B. If the height is not correct, adjust the height adjusting screw (see Figure 1-26 (b)).

Note:
Whenever replacing the reel disk, perform the height checking and adjustment.


Slide it right and left, and check contact with the reel disk.
Master plane
Reel disk height adjusting jig
10 ± 0.2mm
Reel disk
Mechanism chassis
A
B
Reel disk

(a)

(b)

Figure 1-26.

CHECKING AND ADJUSTMENT OF TAKE-UP TORQUE IN FAST FORWARD MODE

- **Remove the cassette housing control assembly.**

- **Setting**

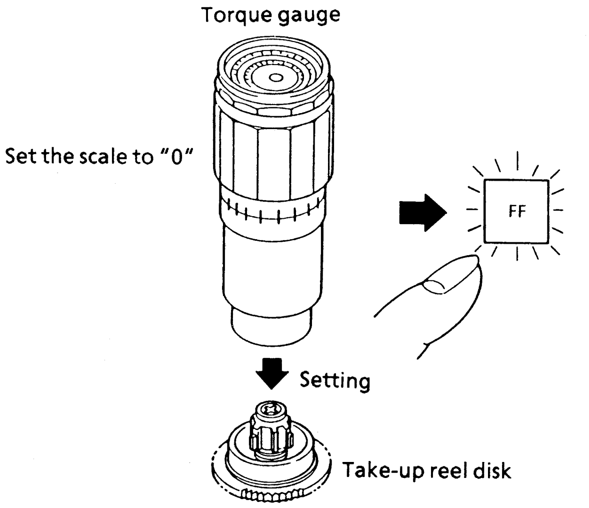

Torque gauge
Set the scale to "0"
FF
Setting
Take-up reel disk

Figure 1-27.

- **Checking**

Turn the torque gauge slowly (one rotation every 2 to 3 seconds) by hand in the take-up direction.

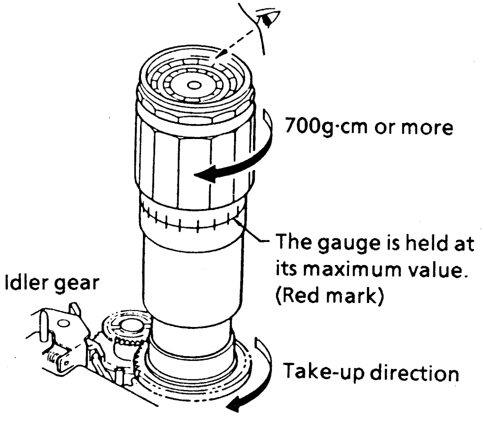

700g·cm or more
The gauge is held at its maximum value. (Red mark)
Idler gear
Take-up direction

Figure 1-28.

- **Adjustment**

1. If the take-up torque is outside the range, clean the capstan D.D. motor pulley, reel belt and reel pulley with cleaning liquid, then recheck the torque.
2. If the take-up torque is still out of range, replace the reel belt.

Notes:

1. Hold down the torque gauge so that it may not fly off.
2. When checking the take-up torque, do not keep the reel disk locked for a longer time.

CHECKING AND ADJUSTMENT OF TAKE-UP TORQUE IN REWIND MODE

- **Remove the cassette housing control assembly.**

- **Setting**

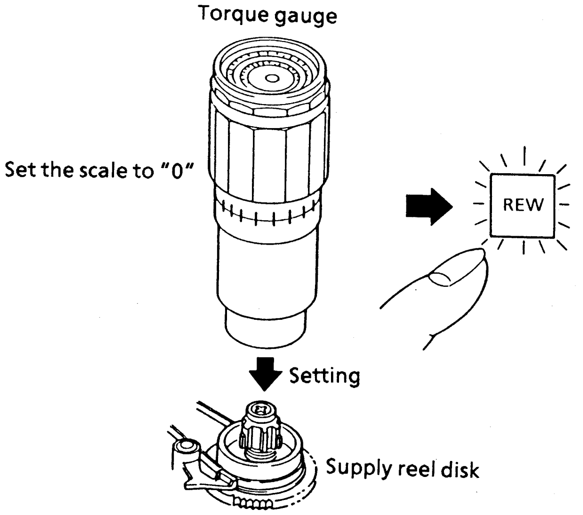

Torque gauge
Set the scale to "0"
REW
Setting
Supply reel disk

Figure 1-29.

- **Checking**

Turn the torque gauge slowly (one rotation every 2 to 3 seconds) by hand in the take-up direction.

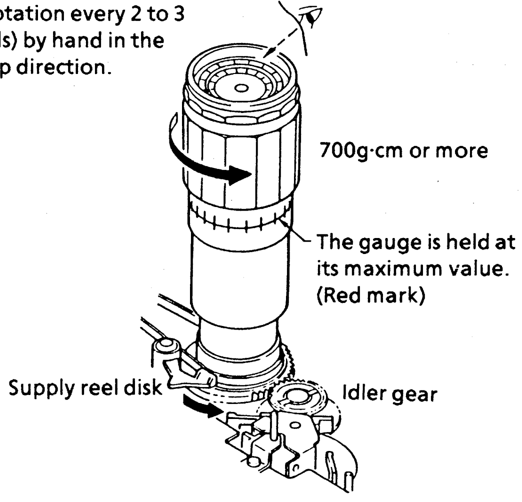

700g·cm or more
The gauge is held at its maximum value. (Red mark)
Supply reel disk
Idler gear

Figure 1-30.

- **Adjustment**

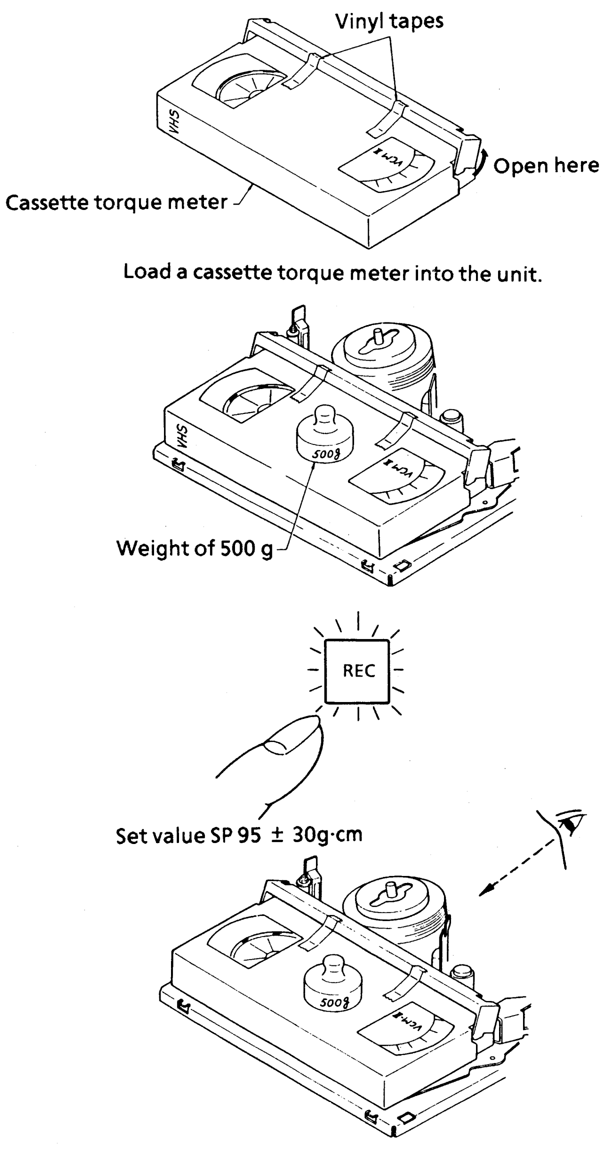
1. If the take-up torque is outside the range, clean the capstan D.D. motor pulley, reel belt and reel pulley with cleaning liquid, then recheck the torque.
2. If the take-up torque is still out of range, replace the reel belt.

Notes:

1. Hold down the torque gauge so that it may not fly off.
2. When checking the take-up torque, do not keep the reel disk locked for a longer time.

CHECKING AND ADJUSTMENT OF TAKE-UP TORQUE IN PLAYBACK MODE

1. Remove the cassette housing control assembly.
2. Open the lid of the cassette torque meter, and hold it with two pieces of vinyl tapes.



Load a cassette torque meter into the unit.

Set value SP 95 ± 30g·cm

Figure 1-31.

- **Checking**

1. Check that the torque is in the range of 95 ± 30 g·cm.
2. The torque fluctuates due to the rotational deviation of the reel drive unit. Use the center of the fluctuation as the value.
3. Place the unit in the SP record mode, and check that the take-up torque is within the range.

- **Adjustment**

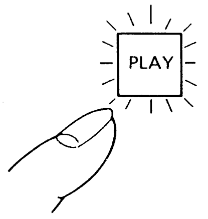
If the take-up torque in the playback mode is outside the range, replace the take-up reel disk.

Note:
Stabilize the cassette torque meter to prevent floating.

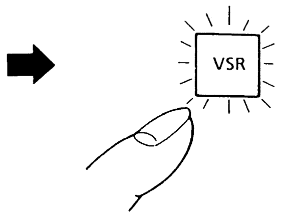
CHECKING AND ADJUSTMENT OF TAKE-UP TORQUE IN VIDEO SEARCH REWIND MODE

- **Remove the cassette housing control assembly.**

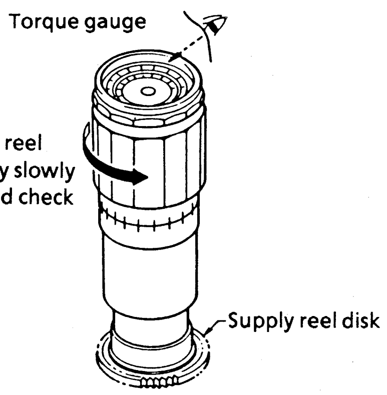
- **Checking**



Push the play button to place the unit in the playback mode.



Push video search rewind button to place the unit in the video search rewind mode.



Place the torque gauge on the supply reel disk, and turn it counterclockwise very slowly (one rotation every 2 to 3 seconds) and check that the torque is within the set value 170 ± 40g·cm.

Figure 1-32.

Note:
Set the torque gauge securely on the supply reel disk. If it is not secure, the measurement will be incorrect.

- **Adjustment**

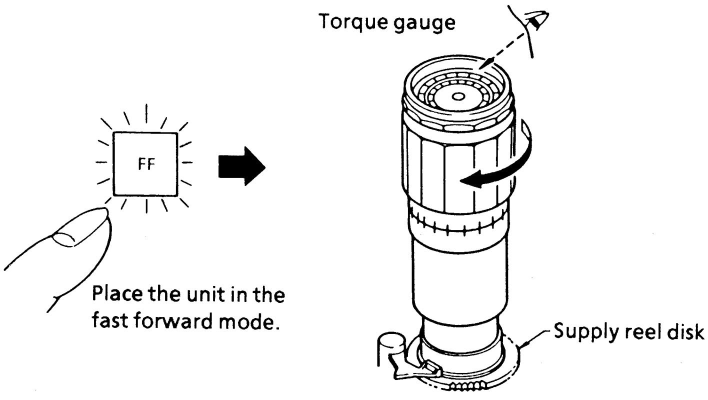
If the take-up torque in video search rewind mode is outside the range, replace the supply reel disk.

Note:
The torque fluctuates due to the rotational deviation of the supply reel disk. Use the center of the fluctuation at the value.

CHECKING THE FAST FORWARD BACK TENSION

- **Remove the cassette housing control assembly.**

- **Checking**


Torque gauge
FF
Place the unit in the fast forward mode.
Supply reel disk

Place the torque gauge on the supply reel disk, and turn it clockwise very slowly (one rotation every 2 to 3 seconds) and check that the torque is within 15 ± 5g·cm.

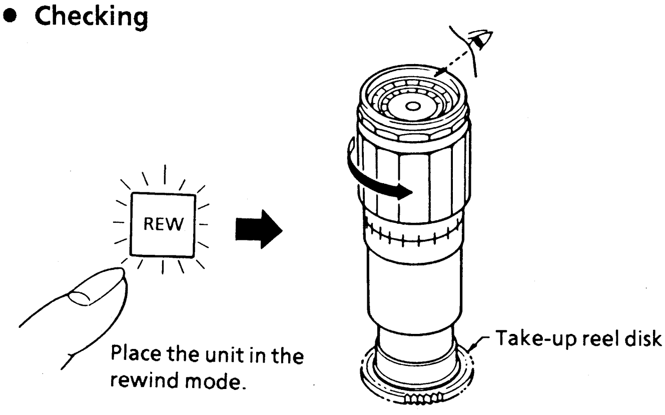
Figure 1-33.

Note:
Set the torque gauge securely on the supply reel disk. If the torque gauge is not securely set on the reel disk, measurement will be incorrect.

CHECKING THE REWIND BACK TENSION

- **Remove the cassette housing control assembly.**

- **Checking**


REW
Place the unit in the rewind mode.
Take-up reel disk

Place the torque gauge on the take-up reel disk, and turn it counterclockwise very slowly (one rotation every 2 to 3 seconds) and check that the torque is within 15 ± 5g·cm.

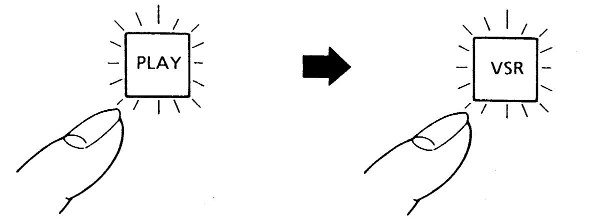
Figure 1-34.

Note:
Set the torque gauge securely on the take-up reel disk. If it is not secure, the measurement will be incorrect.

CHECKING THE VIDEO SEARCH REWIND BACK TENSION

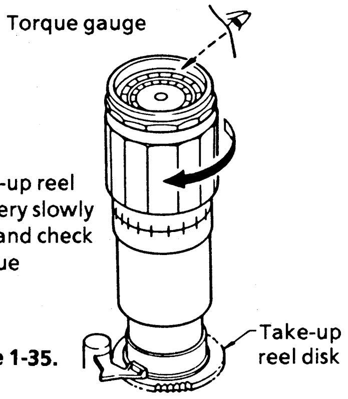
- **Remove the cassette housing control assembly.**

- **Checking**



Push the play button to place the unit in the playback mode.

Push the video search rewind button to place the unit in the video search rewind mode.


Torque gauge
Take-up reel disk

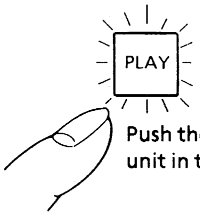
Place the torque gauge on the take-up reel disk, and turn it counterclockwise very slowly (one rotation every 2 to 3 seconds) and check that the torque is within the set value 45 ± 20g·cm.

Figure 1-35.

Note:
Set the torque gauge securely on the take-up reel disk. If it is not secure, the measurement will be incorrect.

CHECKING THE PINCH ROLLER PRESSURE

- **Remove the cassette housing control assembly.**



Push the play button to place the unit in the playback mode.

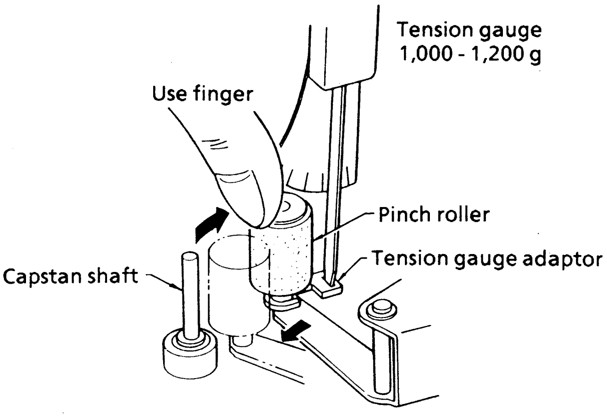

Tension gauge
1,000 - 1,200 g
Use finger
Pinch roller
Tension gauge adaptor
Capstan shaft

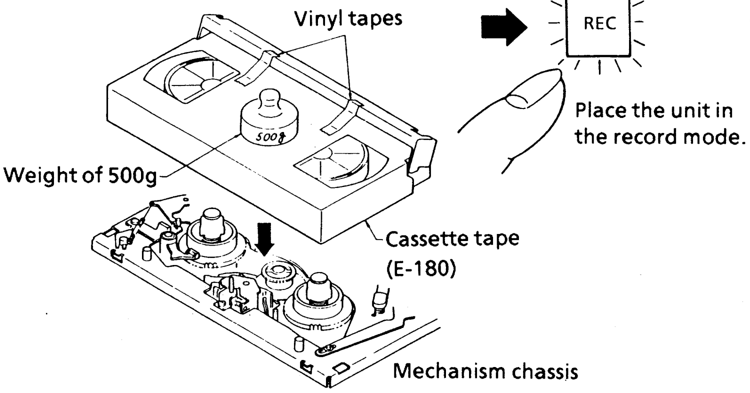
Figure 1-36.

1. Detach the pinch roller from the capstan shaft.
2. Set the tension gauge by hooking the tension gauge adapter onto the pinch roller shaft.
3. Gradually release the pressure to allow the pinch roller to touch the capstan shaft. When the pinch roller just touches the capstan shaft, read the indication on the gauge.
4. Check that the reading of the tension gauge is in the range of 1000 to 1200 g.

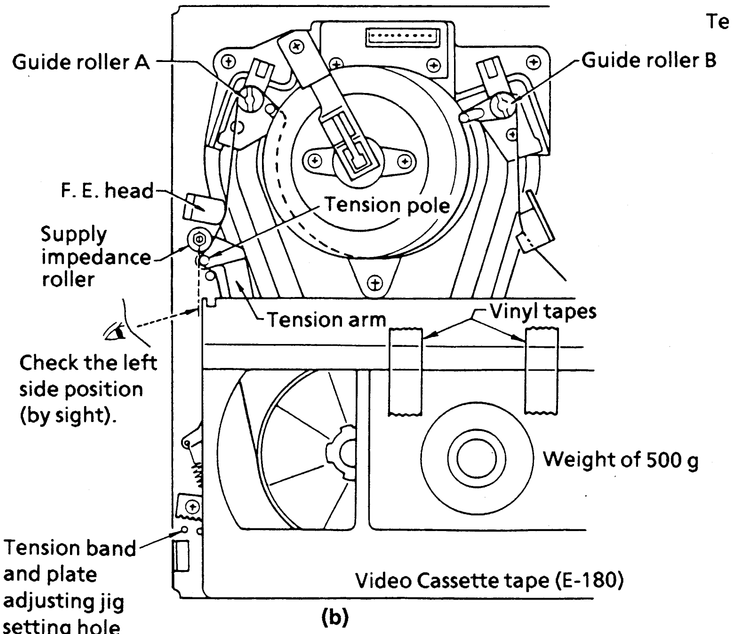
CHECKING AND ADJUSTMENT OF TENSION POLE POSITION

- **Remove the cassette housing control assembly.**

- **Setting**


Vinyl tapes
REC
Place the unit in the record mode.
500g
Weight of 500g
Cassette tape (E-180)
Mechanism chassis

(a)


Guide roller A
Guide roller B
F. E. head
Tension pole
Supply impedance roller
Tension arm
Vinyl tapes
Check the left side position (by sight).
Weight of 500 g
Tension band and plate adjusting jig setting hole
Video Cassette tape (E-180)

(b)

Figure 1-37.

- **Checking**

1. The guide rollers (A, B) operate to bring the tape outside the cassette tape and simultaneously the tension pole moves to the left, loading the tape. At that time (loading completed), check the position of the tension pole.
2. At the beginning of the tape (E-180), check that the tension pole's left side is aligned with the supply impedance roller's center by sight.
3. Check that the end of the tape is neither curled against the flange of the supply impedance roller nor over it.
4. During the video search rewind mode with no cassette tape in place, check that the supply reel disk is free from the tension band.

- **Position adjustment (record mode)**

When the tension pole is at the right of the supply impedance roller's center:

Untighten the tightening screw, and shift the tension band adjustment bracket in the direction of the arrow using a tension band and plate adjusting Jig until it is in the set value range (center). Then secure it with the tightening screw.

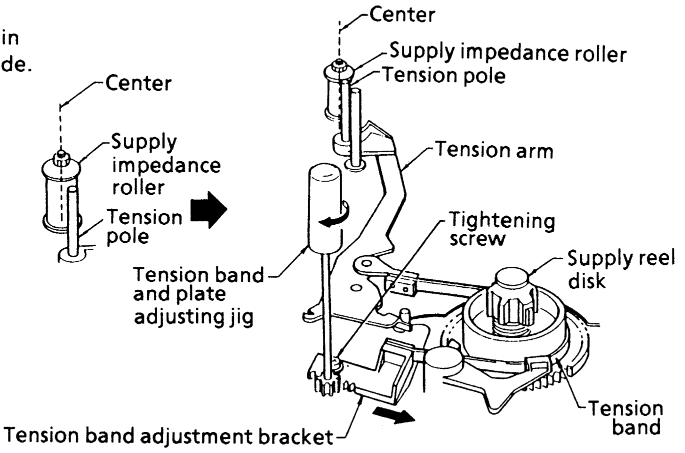

Center
Supply impedance roller
Tension pole
Center
Supply impedance roller
Tension pole
Tension arm
Tightening screw
Supply reel disk
Tension band and plate adjusting jig
Tension band adjustment bracket
Tension band

Figure 1-38.

- **Position adjustment (record mode)**

When the tension pole is at the left of the supply impedance roller's center:

Untighten the tightening screw, and shift the tension band adjustment bracket in the direction of the arrow using a tension band and plate adjusting Jig until it is in the set value range (center). Then secure it with the tightening screw.

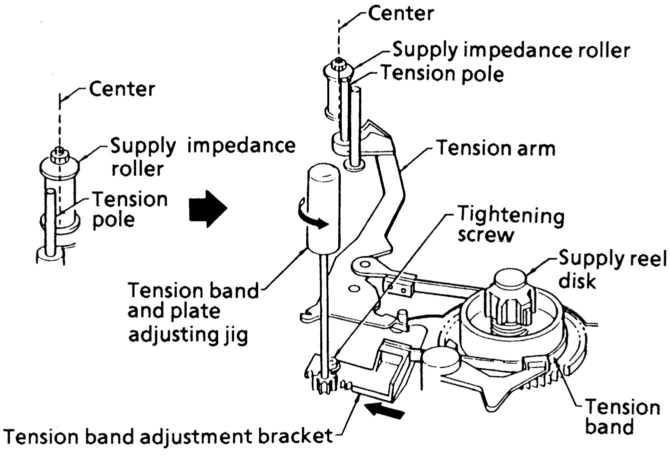

Center
Supply impedance roller
Tension pole
Center
Supply impedance roller
Tension pole
Tension arm
Tightening screw
Supply reel disk
Tension band and plate adjusting jig
Tension band adjustment bracket
Tension band

Figure 1-39.

CHECKING AND ADJUSTMENT OF RECORD / PLAYBACK BACK TENSION

- **Remove the cassette housing control assembly.**

- **Checking**

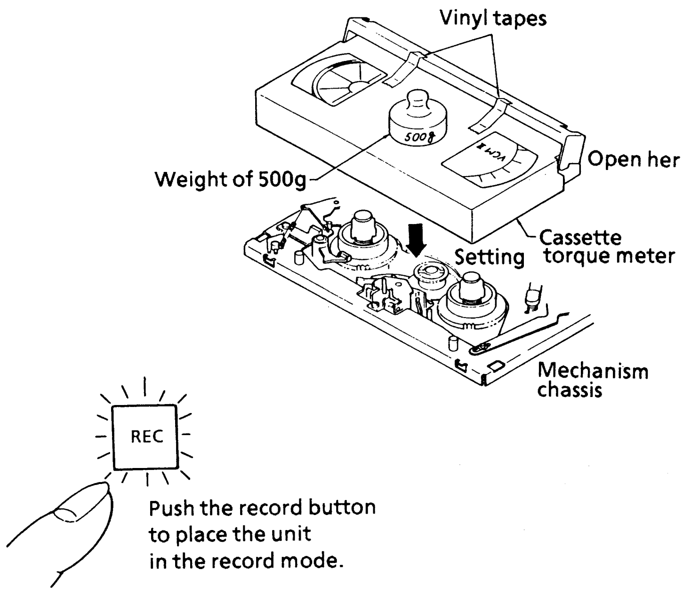

Vinyl tapes
500g
Weight of 500g
Open here
Cassette torque meter
Setting
Mechanism chassis
REC
Push the record button to place the unit in the record mode.

Figure 1-40.

1. Put a cassette torque meter into the unit.
2. Push the record button to place the unit in the record mode.
3. Check that the back tension indicated by the gauge is within the set range 31 to 36 g·cm.

Notes:

1. Make sure that the video cassette tape is over the retaining guide.
2. Make sure that the tape is not slack nor damaged at either end.

- **Adjustment**

1. If the reading of the cassette torque meter is less than specified, move the tip of the tension spring hook plate toward the hole A.
2. If the reading of the cassette torque meter is more than specified, move the tip of the tension spring hook plate toward the hole B.

   Note:

   Put a thin screw driver (–) in the shaft hole, lean it toward you, and turn it for easier shift of the tension spring hook plate in the direction of A or B.

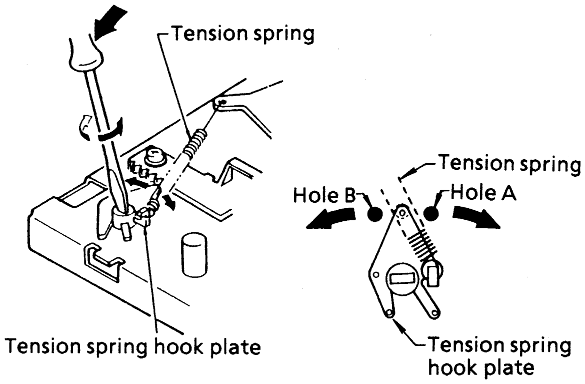
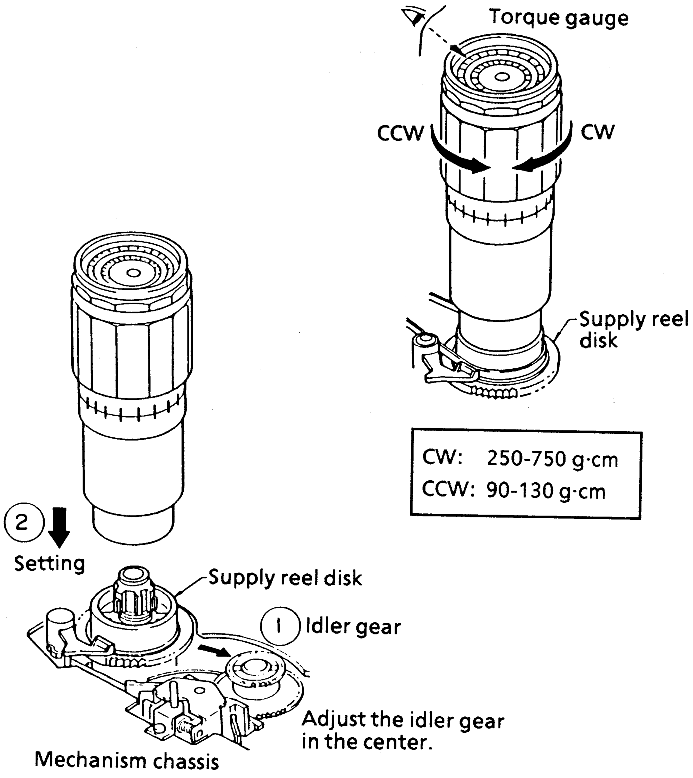

Tension spring
Tension spring hook plate
Tension spring
Hole B
Hole A
Tension spring hook plate

Figure 1-41.

CHECKING THE BRAKE TORQUE

- **Checking the brake torque at the supply side**


Torque gauge
CCW
CW
Supply reel disk
②
Setting
Supply reel disk
Ⓘ Idler gear
Adjust the idler gear in the center.
Mechanism chassis

CW: 250-750 g·cm
CCW: 90-130 g·cm

Figure 1-42.

1. Remove the cassette housing control assembly.
2. Place the mechanism in the stop mode by unplugging the power cord in the fast forward or rewind mode.
3. Slowly rotate the torque gauge in the clockwise (CW) direction and counterclockwise (CCW) direction of the supply brake so that the reel disk and the indicator of the torque gauge rotate at an equal rate. Check that the values are within the range of CW direction = 250 to 750 g·cm, CCW direction = 90 to 130 g·cm, and that the brake torque in the CW direction is at least twice as high as that in the CCW direction.

- **Checking the brake torque at the take-up side**

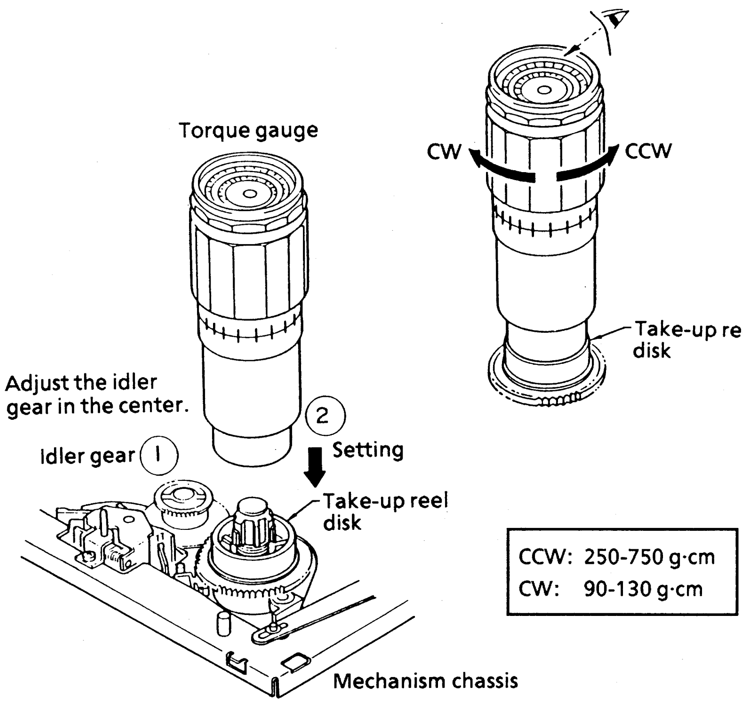

Torque gauge
CW
CCW
Take-up reel disk
Adjust the idler gear in the center.
2
Idler gear
1
Setting
Take-up reel disk
CCW: 250-750 g·cm
CW: 90-130 g·cm
Mechanism chassis

Figure 1-43.

1. Remove the cassette housing control assembly.
2. Slowly rotate the torque gauge in the clockwise (CW) direction and counterclockwise (CCW) direction of the take-up brake so that the reel disk and the indicator of the torque gauge rotate at an equal rate. Check that the values are within the range of CCW direction = 250 to 750 g·cm, CW direction = 90 to 130 g·cm, and that the brake torque in the CCW direction is at least twice as high as that in the CW direction.

- **Adjustment of the brake torque at the supply side and the take-up side**

1. If the supply or take-up brake torque is outside the range, clean the supply or take-up reel disk break lever felt, then recheck the torque.
2. If the supply or take-up brake torque is still outside the range, replace the main brake or the main brake spring.

REPLACEMENT OF MAIN BRAKE

1. Remove the reel belt and the reel block FFC (Full Flat Cable).
2. Remove the cut washer ① off the brake shifter.
3. Unscrew the four screws ② and then the take-up reel retainer.
4. Remove the reel block assembly Ⓐ downward.
5. Remove the cut washer ③ first and then the reel pulley.
6. Unscrew the two screws ④ and detach the idler assembly.
7. Unhook the back tension lever spring ⑤ and remove the back tension lever ⑥. (Undo the hook under the reel chassis.)
8. Open the shifter latch ⑦ and remove the brake shifter assembly ⑧.
9. Release the reel disk catchesand ⑬ then remove the left and right reel disk assemblies ⑨ and ⑩.
10. Finally remove the main brake levers ⑪ and the main brake spring ⑫ .

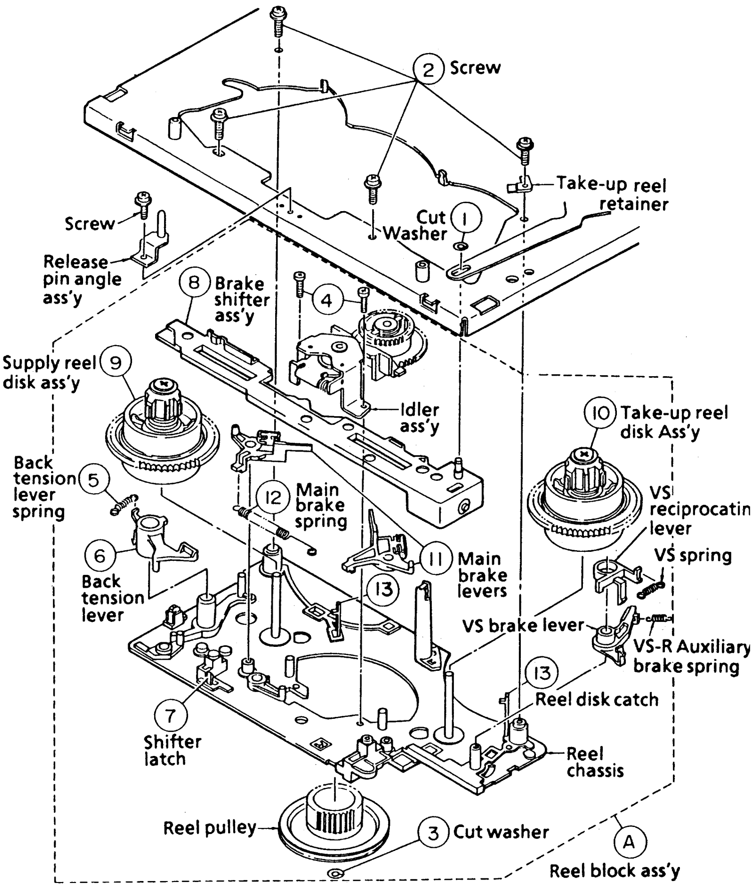

2 Screw
Take-up reel retainer
Screw
Cut Washer 1
Release pin angle ass'y
8 Brake shifter ass'y
4
Supply reel 9 disk ass'y
Idler ass'y
10 Take-up reel disk Ass'y
Back tension lever spring 5
12 Main brake spring
VS reciprocatin lever
VS spring
6 Back tension lever
11 Main brake levers
13
VS brake lever
VS-R Auxiliary brake spring
13 Reel disk catch
7 Shifter latch
Reel chassis
Reel pulley
3 Cut washer
A Reel block ass'y

Figure 1-44.

Note:
When the main brake is replaced, perform the height checking and adjustment (see page 25), and the brake torque checking (see page 30).

REPLACEMENT OF A/C (Audio/Control) HEAD

1. Remove the cassette housing control assembly.
2. Place the unit in the unloading mode, and unplug the power cord.

- **Removal**

1. Loosen the tilt adjusting screw ①.
2. Remove the azimuth adjusting screw ②.
3. Remove the A/C head screw ③.
4. Unsolder the A/C head PWB soldered to the A/C head assembly.

Notes:

1. After replacement, be sure to perform the adjustment of the tape drive train (see page 34). Under any circumstances, avoid touching the head. Clean the head, if touched with your finger, with alcohol.
2. Take care that the azimuth spring does not fly off when removing the A/C head screw.

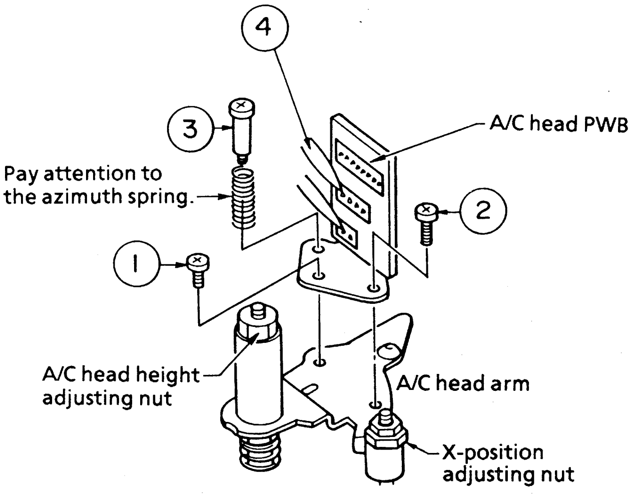

④
③
A/C head PWB
Pay attention to the azimuth spring.
②
①
A/C head height adjusting nut
A/C head arm
X-position adjusting nut

Figure 1-45.

- **Replacement**

1. Solder the removed A/C head PWB onto a new A/C head assembly.
2. The A/C head assembly is attached so that the A/C head arm and A/C head plate are roughly parallel to each other.

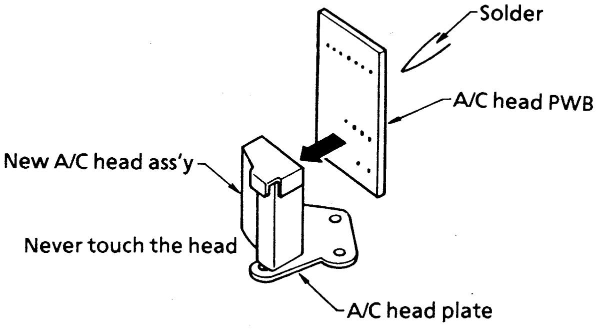

Solder
A/C head PWB
New A/C head ass'y
Never touch the head
A/C head plate

Figure 1-46.

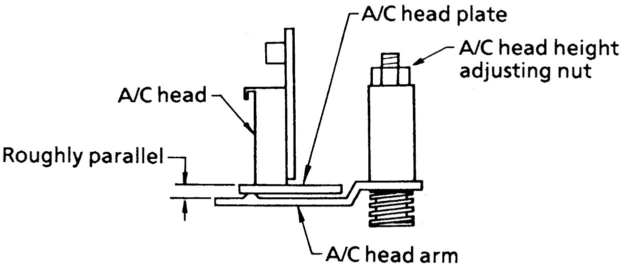
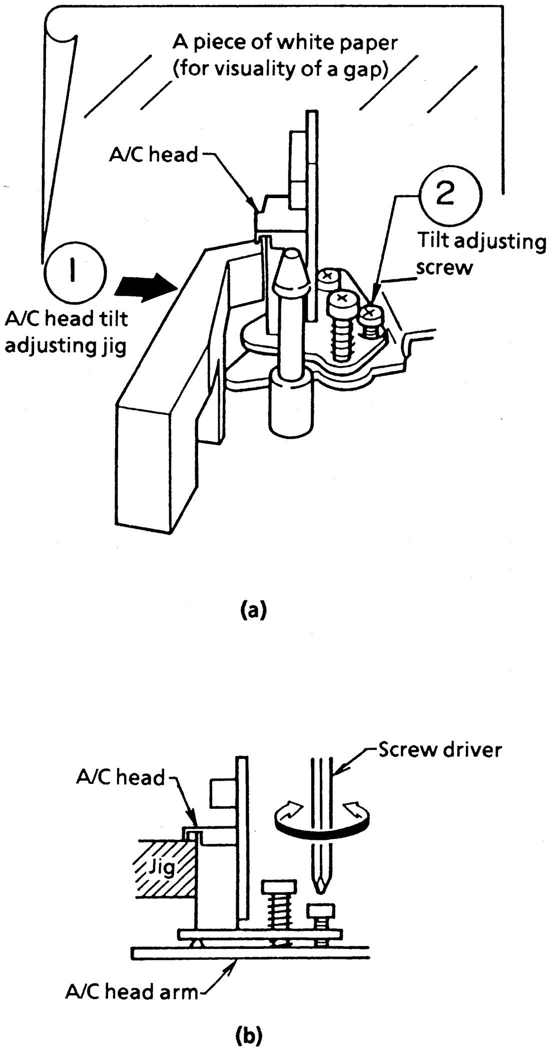

A/C head plate
A/C head height adjusting nut
A/C head
Roughly parallel
A/C head arm

Figure 1-47.

- **Adjustment**

[A/C head tilt angle]

1. Set the mechanism to the loading mode.
2. Place the A/C head tilt adjusting Jig ①.
3. Slowly turn the tilt adjusting screw ② with a screw driver until there is no gap between the Jig and the A/C head.

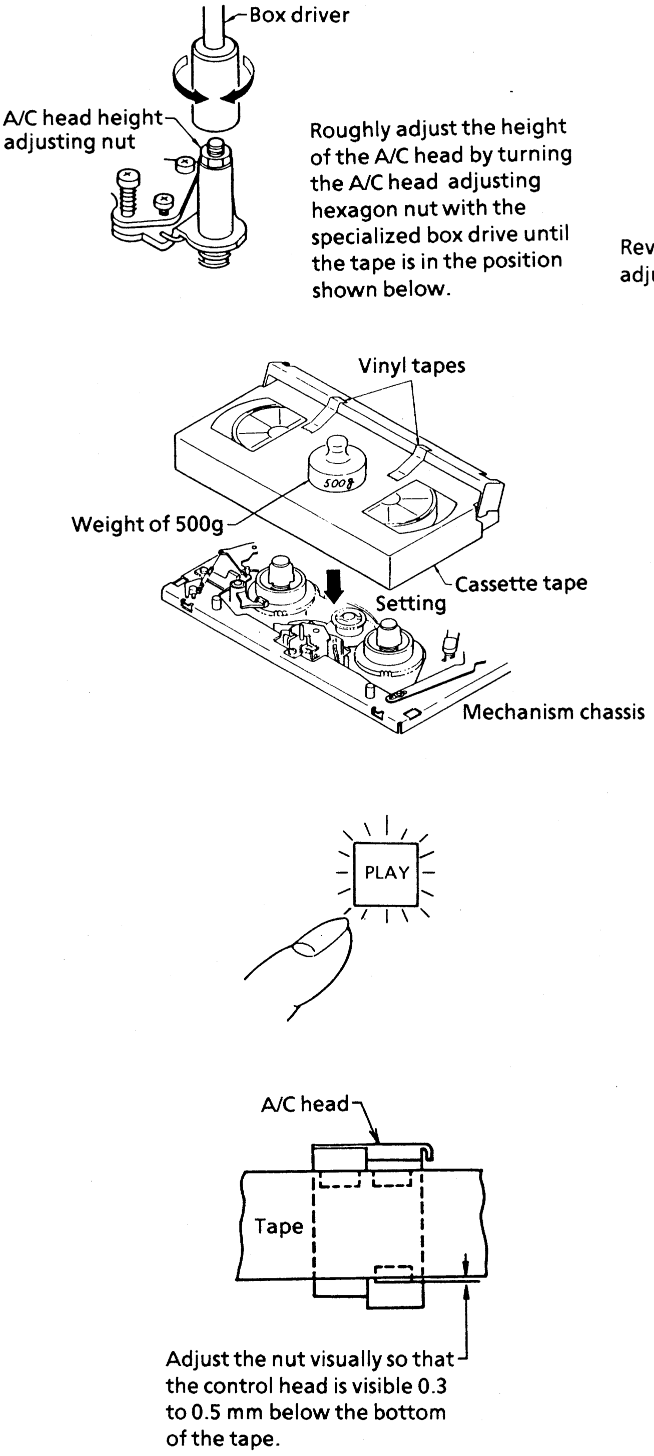

A piece of white paper (for visuality of a gap)
A/C head
②
Tilt adjusting screw
①
A/C head tilt adjusting jig
A/C head
Screw driver
Jig
A/C head arm

(a)

(b)

Figure 1-48.

[A/C head height rough adjustment]


Box driver
A/C head height adjusting nut
Vinyl tapes
500g
Weight of 500g
Cassette tape
Setting
Mechanism chassis
PLAY
A/C head
Tape

Roughly adjust the height of the A/C head by turning the A/C head adjusting hexagon nut with the specialized box drive until the tape is in the position shown below.

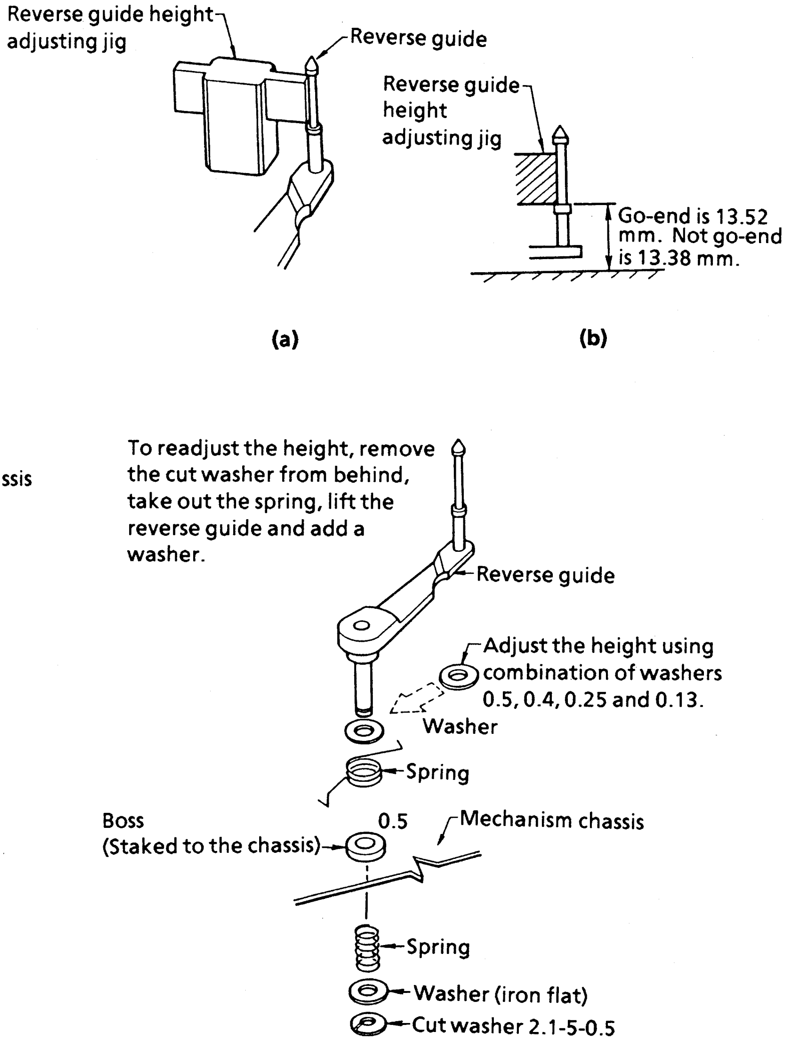
Adjust the nut visually so that the control head is visible 0.3 to 0.5 mm below the bottom of the tape.

Figure 1-49.

HEIGHT ADJUSTMENT OF REVERSE GUIDE

Note:

Before the rough adjustment of the tape drive train, check that the retaining guide height is within the value in Figure 1-50 by using the special Jigs.


Reverse guide height adjusting jig
Reverse guide
Reverse guide height adjusting jig
Go-end is 13.52 mm. Not go-end is 13.38 mm.
(a)
(b)
Reverse guide
Adjust the height using combination of washers 0.5, 0.4, 0.25 and 0.13.
Washer
Spring
Boss (Staked to the chassis)
0.5
Mechanism chassis
Spring
Washer (iron flat)
Cut washer 2.1-5-0.5
(c)

To readjust the height, remove the cut washer from behind, take out the spring, lift the reverse guide and add a washer.

Figure 1-50.

ADJUSTMENT OF TAPE DRIVE TRAIN

1. Remove the cassette housing control assembly.
2. Check and adjust the position of the tension pole. (See page 29.)
3. Check and adjust the video search rewind back tension. (See page 28.)
4. Set the tilt angle of the A/C head. (See page 32.)
5. Rough adjustment of tape drive train.
   a) Connect the oscilloscope to the test point for PB CHROMA envelope output (TP2201). Set the synchronism of the oscilloscope to EXT. The PB CHROMA signal is to be triggered by the head switching pulse (TP2202).
   b) Loosen the setscrew at the lower part of the guide roller, and adjust it with an adjusting screw driver (JIGDRIVERH-4) so that the guide roller turns smoothly. (Do not overloosen the setscrew, which causes insecurity of the guide roller.) (See Figure 1-51.)
   c) Set the alignment tape (monoscope pattern) on the reel disk, and place the unit in the playback mode.
   (Place a 500 g weight on the cassette tape to prevent floating of the cassette tape.)

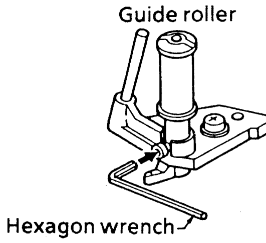


Figure 1-51.

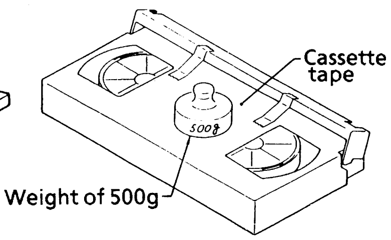
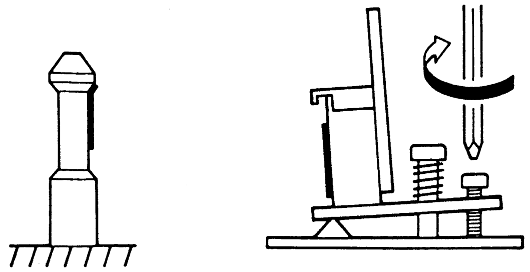


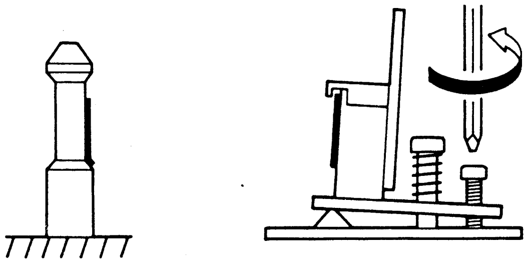
Figure 1-52.

   d) Change the envelope waveform from MAX to MIN, and MIN to MAX by pushing the (+) or (–) tracking button, and check a flat response is obtained on the waveform.
   e) If a flat response cannot be obtained, roughly adjust the guide rollers on the supply side and take-up side using an adjusting screw driver until a flat response can be obtained.
   f) Turn the A/C head tilt adjusting screw with a screwdriver to prevent the tape from wrinkling at the upper and lower flanges of the fixed guide.
      1) Wrinkles at the upper flange : Turn the above adjusting screw clockwise, as shown in Figure 1-53 (a).
      2) Wrinkles at the lower flange : Turn the above adjusting screw counterclockwise, as shown in Figure 1-53 (b).



Wrinkles at upper flange Clockwise

(a)



Wrinkles at lower flange Counterclockwise

(b)

Figure 1-53.

Notes:

1. Place the tracking control in the center position, and adjust the X-position adjusting nut so that the PB CHROMA envelop becomes maximum for easier rough adjustment of the tape drive train.
2. In the rough adjustment, pay particular attention to the outlet side.

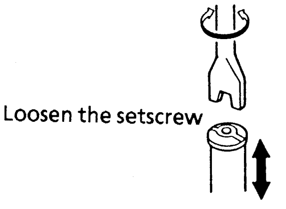


Figure 1-54.

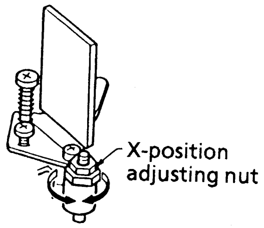


Figure 1-55.

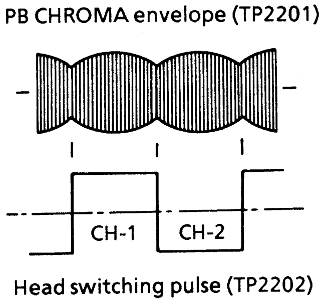


Figure 1-56.

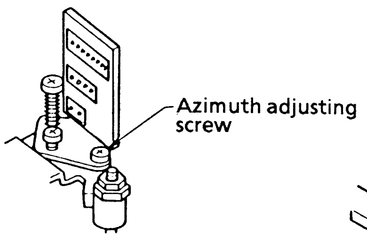


Figure 1-57.

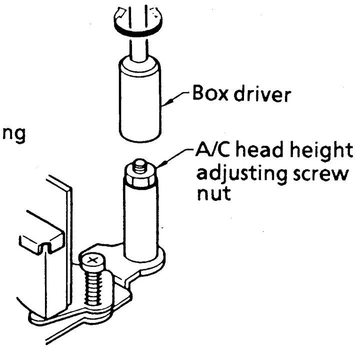


Figure 1-58.

6. Adjustment of A/C head height and azimuth
   a) Connect an oscilloscope to the audio output. (Pin (7) of EL connector.)
   b) Use the alignment tape and play back its audio 7 kHz signal (monoscope pattern for video signal). Adjust the azimuth adjusting screw to obtain the maximum audio output on an oscilloscope. (See Figure 1-57.)
   c) Use the alignment tape and play back its audio 1 kHz signal (colour bar for video signal) and slowly rotate the A/C head height adjusting nut with the special box driver to obtain the maximum audio output.
   d) Perform the adjustment in b) again.
   e) After this adjustment, apply glyptal to the screws and nuts to fix them.

7. Adjustment of tape drive train and X-Position.
   a) Connect the oscilloscope to the test points (TP2201) for PB CHROMA envelope output. Set the synchronism of the oscilloscope to EXT. The PB CHROMA signal is to be triggered by the head switching pulse (TP2202).
   b) Play back the tape drive train alignment tape.
   c) Push the (+) or (–) button to change the envelope waveform from MAX to MIN, and MIN to MAX. Adjust the guide roller's height on the supply and take-up sides with an adjusting screw driver, to obtain an envelop waveform that is as flat as possible.
   d) If the tape is above or below the helical lead, the PB CHROMA waveform will take the shape shown in Figure 1-59.
   e) Adjust for maximum flatness of the envelope as the step 5, e) in page 34.

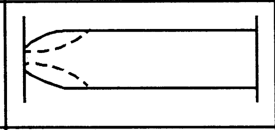
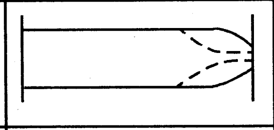
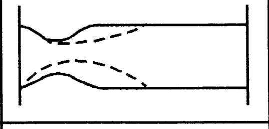
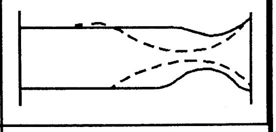
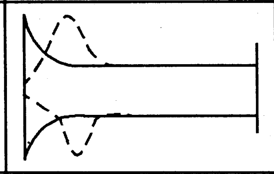
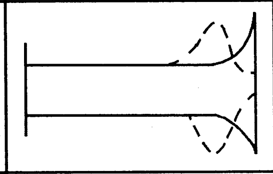
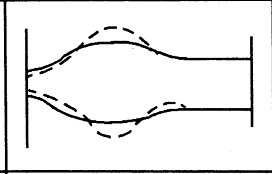
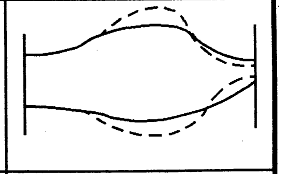
	When the tape is above the helical lead.		When the tape is below the helical lead.	
	Supply side	Take-up side	Supply side	Take-up side
				
				
Adjustment	Supply side guide roller rotated in clockwise direction (lowers guide roller) to flatten envelope.	Take-up side guide roller rotated in clockwise direction (lowers guide roller) to flatten envelope.	Supply side guide roller rotated in counterclockwise direction (raises guide roller) to make the tape float above the helical lead. The supply side guide roller is then rotated in the clockwise direction to flatten the envelope.	Take-up side guide roller rotated in counterclockwise direction (raises guide roller) to make the tape float above the helical lead. The take-up side guide roller is then rotated in the clockwise direction to flatten the envelope.

Figure 1-59.

f) Push the (+) or (–) tracking button to check that a flat response is obtained on the envelope waveform.

g) Secure the guide roller by tightening the guide roller setscrew in the unloading mode.

h) Play back the tape drive train alignment tape to check that the envelope waveform does not change.

8. Adjustment of A/C head X-position.
   a) Push the (+) and (–) tracking buttons at the same time to the preset mode.
   b) Rotate the X-position adjusting nut with an adjusting box driver, and adjust the A/C head position for maximum head switching pulse low side envelope.
   c) Adjust the playback switching point.
   d) Check the flatness of the envelope waveform and sound by playing back a recorded tape.

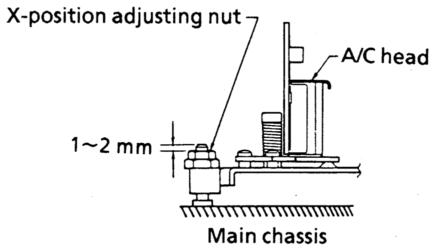

X-position adjusting nut
A/C head
1~2 mm
Main chassis

Figure 1-60.

REPLACEMENT OF THE CAPSTAN D.D. (DIRECT DRIVE) MOTOR

- **Remove the cassette housing control assembly.**
- **Removal (Follow the order of indicated numbers.)**

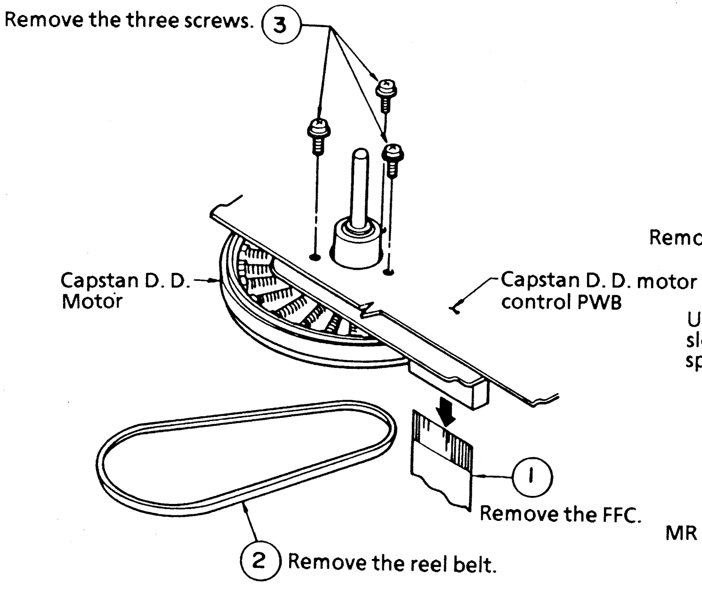

Remove the three screws. 3
Capstan D. D. Motor
Capstan D. D. motor control PWB
1
Remove the FFC.
2 Remove the reel belt.

Figure 1-61.

- **Reassembly**

1. Mount the capstan motor on the mechanism chassis making sure not to allow the capstan shaft to hit the mechanism chassis, and attach it with the three screws.
2. Insert the FFC into the capstan D.D. motor control PWB.
3. Attach the reel belt.

Notes:

1. After installing the capstan D.D. motor, be sure to rotate the capstan D.D. motor and check the movement.
2. Check and adjust the servo circuit.

REMOVAL AND REASSEMBLY OF THE LOADING GEAR BLOCK

Notes:

1. Remove the cassette housing control assembly.
2. Remove the reel belt.
3. Remove the reel block.

- **Removal**

Notes:

1. Use care not to deform the parts hooked to the slow brake shaft cap, take-up loading gear and supply loading gear as shown in Figure 1-62.

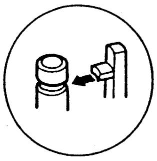


Figure 1-62.

2. In removing the loading gear, secure the guide roller with a rubber band or the like beforehand for easier reassembly.

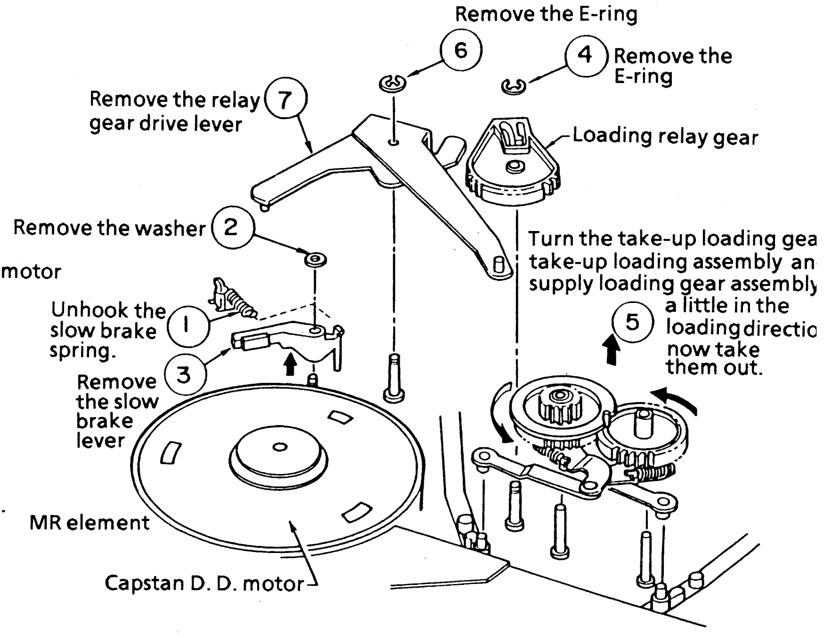

Remove the E-ring
6
4 Remove the E-ring
Remove the relay 7 gear drive lever
Loading relay gear
Remove the washer 2
Turn the take-up loading gea take-up loading assembly an supply loading gear assembl
5 a little in the loading directio now take them out.
Unhook the slow brake spring. 1
Remove the slow brake lever 3
MR element
Capstan D. D. motor

Figure 1-63.

1. Remove the slow brake spring ①.
2. Remove the washer ②.
3. Remove the slow brake lever ③.
4. Remove the E ring ④.
5. Rotate the take-up loading gear, take-up loading arm assembly, supply loading gear and supply loading arm assembly slightly in the loading direction, and take them ⑤ all out.
6. Remove the E ring ⑥.
7. Remove the relay gear drive lever ⑦.

- **Reassembly**
  Reverse the procedure. Be sure to match the tally marks on the gears.

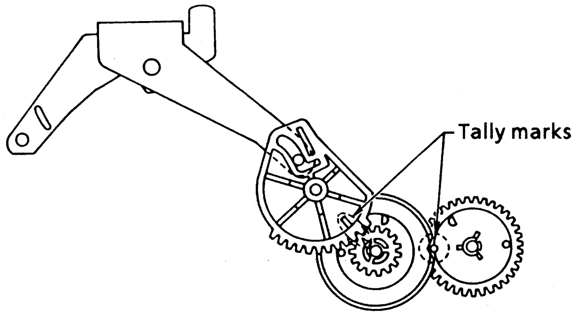


Figure 1-64.

Notes:

1. When reassembling, apply specified grease to the following points; all the gear teeth, all the gear shafts and the cam groove of loading relay gear.
2. Be careful not to deform the supply/take-up loading arms.
3. Be careful to keep clean the slow brake lever felt.
4. Be also careful to keep the outer surface of the capstan D.D. motor free from dust and dirt. (If stained, the MR (Magnet Resistor) element might be damaged.)
5. Take care not to deform the anti-fall hooks of the slow brake lever, slow brake shaft cap and supply/ take-up loading gears more than required.

REMOVAL AND REASSEMBLY OF LOADING BLOCK

- **Removal**

1. Remove the cassette loading belt ①.
2. Unscrew the three screws ②.
3. Pull the loading block upward.

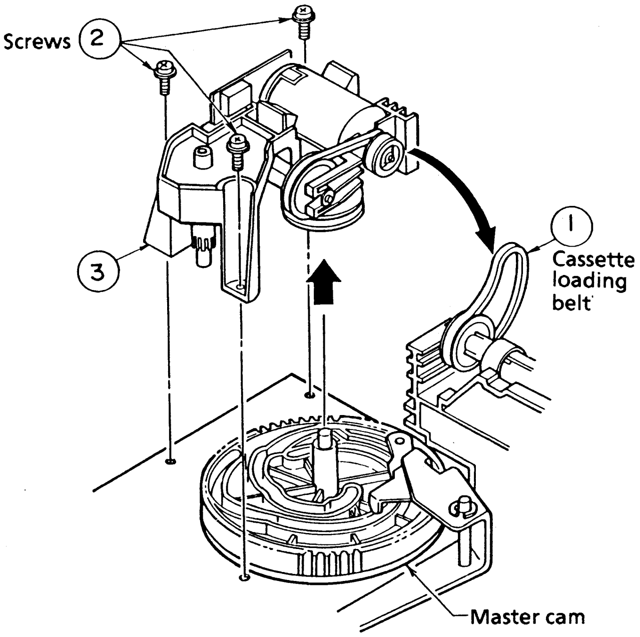


Figure 1-65.

Note:
When using a magnetic screw driver in removal of three screws, do not allow the magnetic driver to hit the A/C head or drums.

- **Reassembly**

1. Turn the master cam all the way counter-clockwise.
2. Match the tally mark on the cam switch with the mating mark. Fit the loading block and the master cam with each other. Tighten up the three screws.

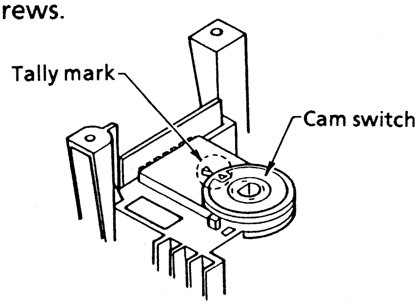


Figure 1-66.

3. Finally connect the leads and apply the cassette loading belt.

Notes:

1. Be careful not to scratch the gear.
2. Be careful not to stain the belt. If dirty, clean it up with the specified cleaning liquid.

REPLACEMENT OF LOADING MOTOR

1. Set the cassette ejected condition by placing the unit in the cassette eject mode.
2. Unplug the power cord.
3. Remove the loading block in accordance with the statements and drawings above.

- **Removal**

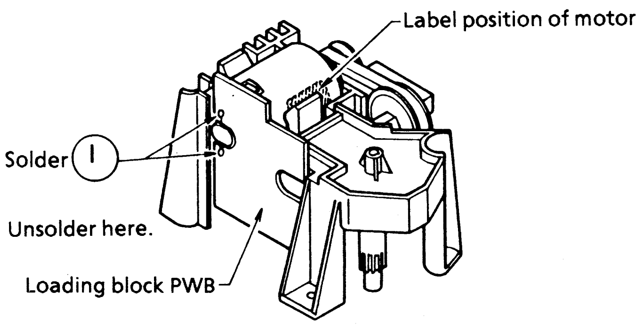
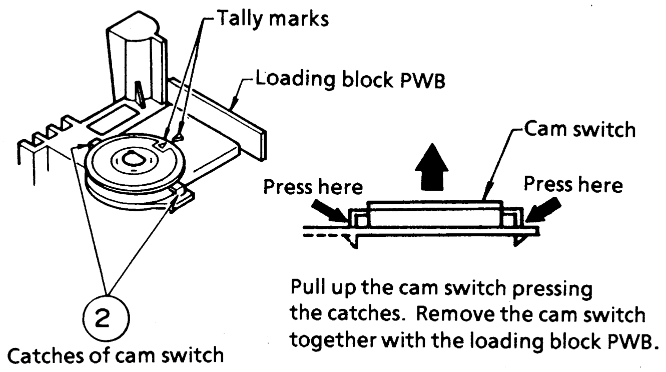

Label position of motor
Solder ①
Unsolder here.
Loading block PWB

Figure 1-67.

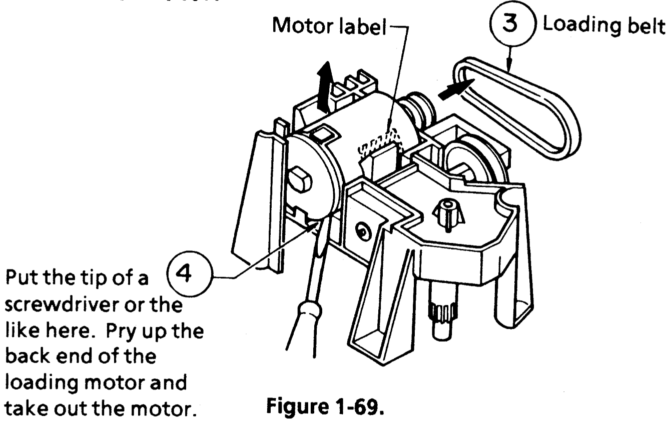
1. Unsolder the leads ① from the loading motor.
2. Unlock the left and right catches ② of the cam switch off the loading block. Take out the cam switch and loading block PWB (See Figure 1-68).


Tally marks
Loading block PWB
Cam switch
Press here
Press here
②
Catches of cam switch

Pull up the cam switch pressing the catches. Remove the cam switch together with the loading block PWB.

Figure 1-68.

3. Take out the loading belt ③.
4. Pry up the back end of the loading motor with a screw driver or the like as in Figure 1-69 and take out the motor.


Motor label
③ Loading belt
④

Put the tip of a screwdriver or the like here. Pry up the back end of the loading motor and take out the motor.

Figure 1-69.

- **Reassembly**

1. Remove the loading motor, and mount a new loading motor as in Figure 1-70.
2. Place the loading motor so that its label is visible as shown in Figure 1-70. Make sure that the screw hole at the motor shaft, protuberance on the loading block, and the motor's back end marked with the arrow are mated with each other.

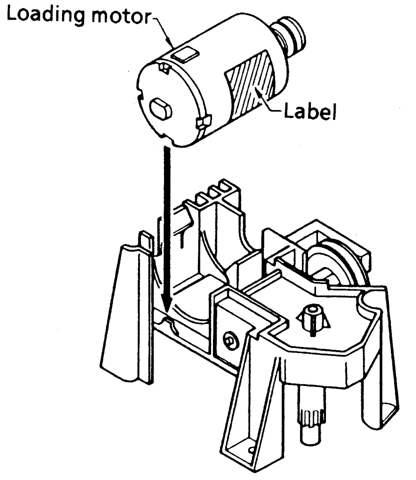
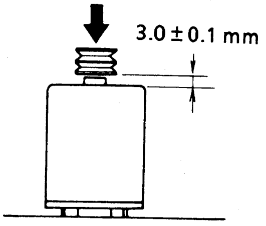

Loading motor
Label

Figure 1-70.



Note:
When press-fitting the loading motor pulley, keep the pressure less than 5 kg, and the gap between the motor and pulley should be 3.0 ± 0.1 mm.

Figure 1-71.

3. Set the loading block PWB and the cam switch in position.
4. Resolder the leads to the loading motor.
5. Finally place the loading block (See page 37).
6. Attach the loading belt.

REPLACEMENT OF MASTER CAM

- **Removal**

1. Remove the E ring ①.
2. Remove the pinch roller lever ②.
3. Pull out the master cam ③ upward.

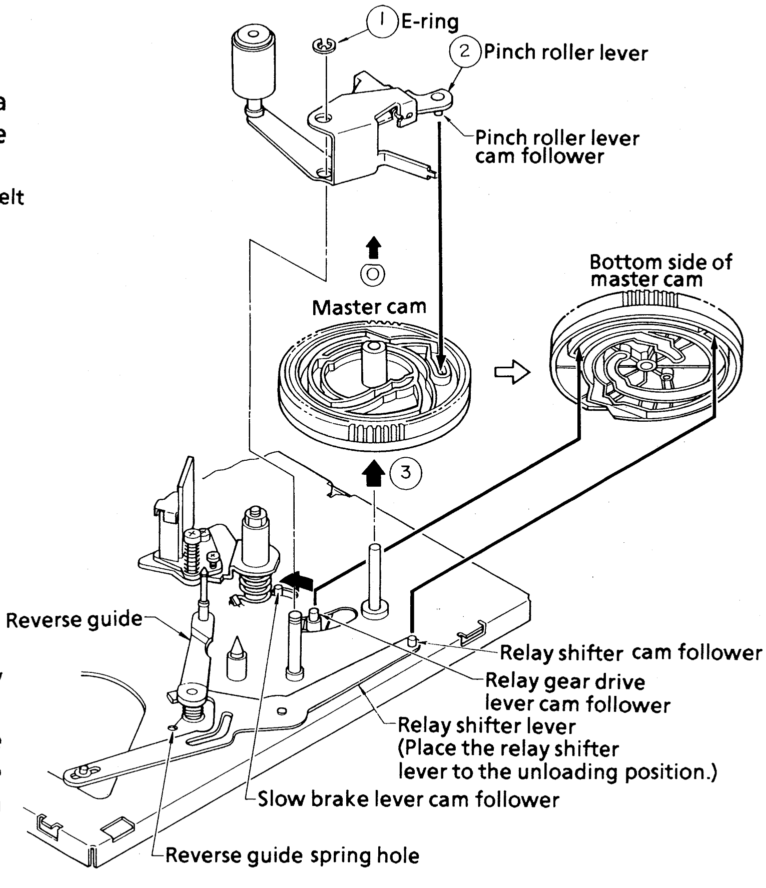

① E-ring
② Pinch roller lever
Pinch roller lever cam follower
◎
Bottom side of master cam
Master cam
③
Reverse guide
Relay shifter cam follower
Relay gear drive lever cam follower
Relay shifter lever (Place the relay shifter lever to the unloading position.)
Slow brake lever cam follower
Reverse guide spring hole

Figure 1-72.

- **Reassembly**

1. Place the relay gear drive lever in the unloading state.
2. Place the relay shifter so that it is in contact with the reverse guide spring hole in the mechanism chassis. Release the slow brake lever with a finger to bring it away from the capstan (in the direction of arrow). Then place the master cam so that the D cut-off part of the master cam faces the direction of arrow.
3. Turn the master cam somewhat clockwise until the pinch roller lever's cam follower goes into the master cam's groove (marked with arrow). Mount the pinch roller lever and then attach the E ring.
4. Rotate the master cam by hand to make sure all the four levers (relay gear drive lever, pinch roller lever and relay shifter lever) are in the cam grooves in place.
5. Mount the loading block. (See page 37.)

Notes:

1. Be careful not to scratch the teeth and grooves of the master cam.
2. After installation of the master cam, be sure to rotate the master cam by hand before installing the loading block. If the levers are in wrong position, the master cam and the levers may get damaged when the motor stares.
3. Apply specified grease to the master cam's grooves and teeth.

REPLACEMENT OF UPPER DRUM

Note:

The gap between the lower drum and the upper drum is very accurate, in the order of microns, and care should be paid to their replacement. Even a slight amount of foreign material will affect the accuracy of their reassembly.

- **Replacement (Follow the order of the indicated numbers.)**

Notes:

1. Avoid touching the drum surface with bare hands.
2. Pull out the upper drum with care so that it may not be tilted, and replace it with the upper drum replacing jig using care not to damage the disk circumference.
3. Do not hit the screws when tightening them.

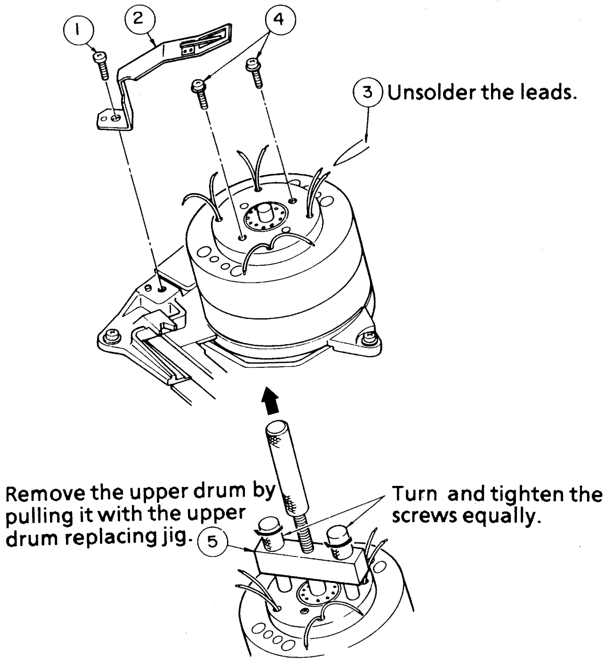

①
②
④
③ Unsolder the leads.
Remove the upper drum by pulling it with the upper drum replacing jig. ⑤
Turn and tighten the screws equally.

Figure 1-73.

- **Reassembly**

Notes:

1. Before setting the drum, check that there are no scratches or dust on the edge of the surface and circumference of the disk.
2. Before setting the drum, check that there are no scratches or dust on the internal surface and edge of the surface of the upper drum.
3. On assembling these parts, insert the upper drum onto the disk with care, so that the upper drum is not tilted.
4. When assembling these parts, do not allow dust or dirt come between the disk and the upper drum.
5. Do not use excessive force when driving in the screws.

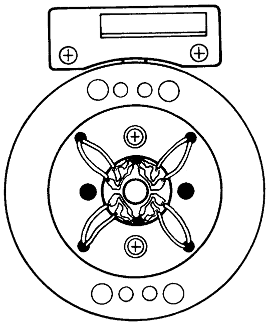


Figure 1-74.

1. Set the new drum.
2. Fasten the upper drum in place with the two screws.
3. Solder the leads.
   Note:
   Soldering should be performed quickly and carefully without touching adjacent patterns.
4. After replacement, be sure to check the tape drive train adjustment (see page 34.) and the following electric adjustments.
   - Adjustment of the playback switching point.
   - Checking and adjustment of the X-position.
   - Adjustment of SP slow tracking preset.

REPLACEMENT OF D.D. MOTOR

1. Put the unit in the cassette eject position.
2. Unplug the power cord.

- **Removal (Reverse the order in reassembly.)**

1. Remove the FFC ①.
2. Remove the two D.D. rotor assembly setscrews ②.
3. Pull out the D.D. rotor ass'y ③.
4. Remove the three D.D. stator setscrews ④.
5. Remove the D.D. stator assembly ⑤.

Notes:

1. When removing the D.D. rotor assembly or D.D. stator assembly, use care not to hit the loading relay gear.
2. Secure the D.D. rotor assembly so that the installation positioning holes in the D.D. rotor assembly and lower drum assembly match.
3. Be careful not to damage the upper drum or the video head.
4. Be sure that the hall device and the D.D. stator assembly are not damaged by the D.D. rotor assembly or other parts.
5. After installation, adjust the playback switching point.

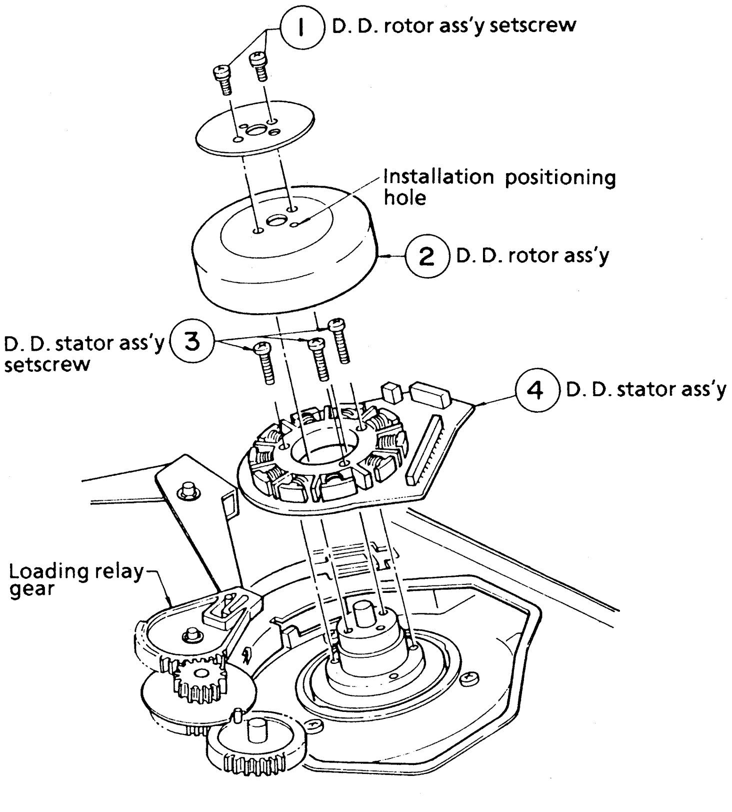

① D. D. rotor ass'y setscrew
Installation positioning hole
② D. D. rotor ass'y
D. D. stator ass'y ③ setscrew
④ D. D. stator ass'y
Loading relay gear

Figure 1-75.

REPLACING THE AHC (AUTOMATIC HEAD CLEANER)

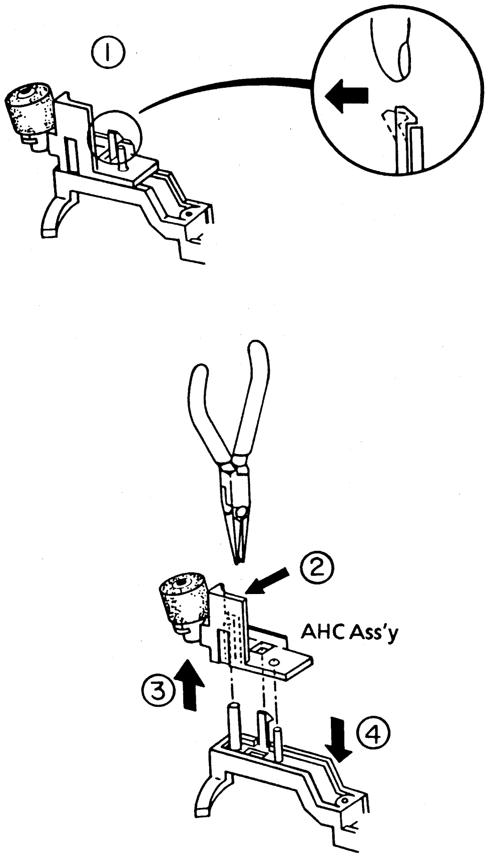


Figure 1-76.

- **Removal**

1. Unhook part ① with a finger in the direction of arrow.
   Hold the rib (marked with an arrow) of the AHC ass'y ② with electrician's pliers or the like, and pull the ass'y upward in the direction of arrow ③.

Note:
To pull out the AHC ass'y, hold the AHC lever down.

- **Reassembly**

1. Push down the AHC ass'y in the direction of arrow ④. Make sure that the ass'y is secured in position by the hook of part ①.

Notes:

1. Be careful to keep the AHC ass'y out of contact with the drum.
2. Be careful to keep the cleaner section of the ass'y free of grease of contaminants.

ADJUSTMENT OF THE VCR ELECTRICAL CIRCUITRY

Notes:

- Before the adjustment:
  Electrical adjustments discussed here are often required after replacement of electronic components and mechanical parts such as video heads.
  Check that the mechanism and all electric components are in good working condition prior to the adjustments, otherwise adjustments can not be completed.

- Instruments required:
  ◎Audio signal generator
  ◎ Dual-trace oscilloscope
  ◎ AC milli-voltmeter
  ◎ Frequency counter
  ◎ Blank video cassette tape
  ◎ Screwdriver for adjustment
  ◎Colour bar generator
  ◎DC voltmeter
  ◎ Alignment tape (VROCPSV)
  ◎ Extension connector
  (QCNW-3778CEZZ: AB ~ AB)
  (QCNW-3780CEZZ: AC ~ AC)

■ SERVO CIRCUIT ADJUSTMENT

Adjustment of head switching point

Measuring instrument	Dual-trace oscilloscope
Mode	Playback
Cassette	Alignment tape (VROCPSV)
Test point	VIDEO OUT (pin (3) of EL connector) to CH1 TP2202 (Trigger) to CH2 (Located on the Y/C PWB)
Control	R7701 head switching point adjustment control
Specification	6.5 ± 0.5 H (lines)

1. Play the alignment tape.(VROCPSV.)
2. Short circuit test points TP8201 and TP8202 on the A/V Jack PWB or remove the cassette housing ass'y to set the auto tracking to center. (See Note below)
3. Connect a dual trace oscilloscope to the VIDEO OUT (pin (3) of EL connector) and TP2202. (Trigger the oscilloscope with the head switching pulse on TP2202.)
4. Adjust R7701 so that the leading edge of the head switching pulse is 6.5H (lines) ahead of the vertical sync as shown in Figure 2-1.

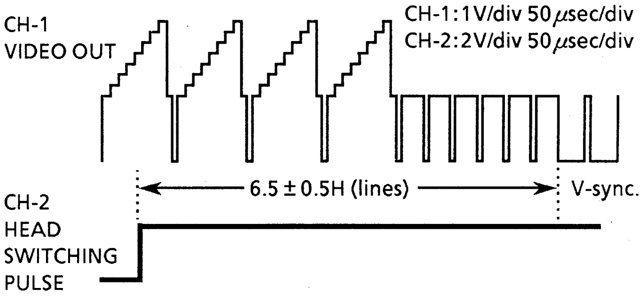


Figure 2-1.

Notes:

To make this adjustment, disable the AUTO TRACKING function.

The AUTO TRACKING function is disabled in the following cases.

(In the playback mode only.)

① When the cassette housing control ass'y is removed, press both tracking control buttons of the remote control unit at the same time to set the tracking in center.

② When test points TP8201 and TP8202 on the A/V jack PWB are short-circuited.

■ Test points layout of VCR Main Unit.

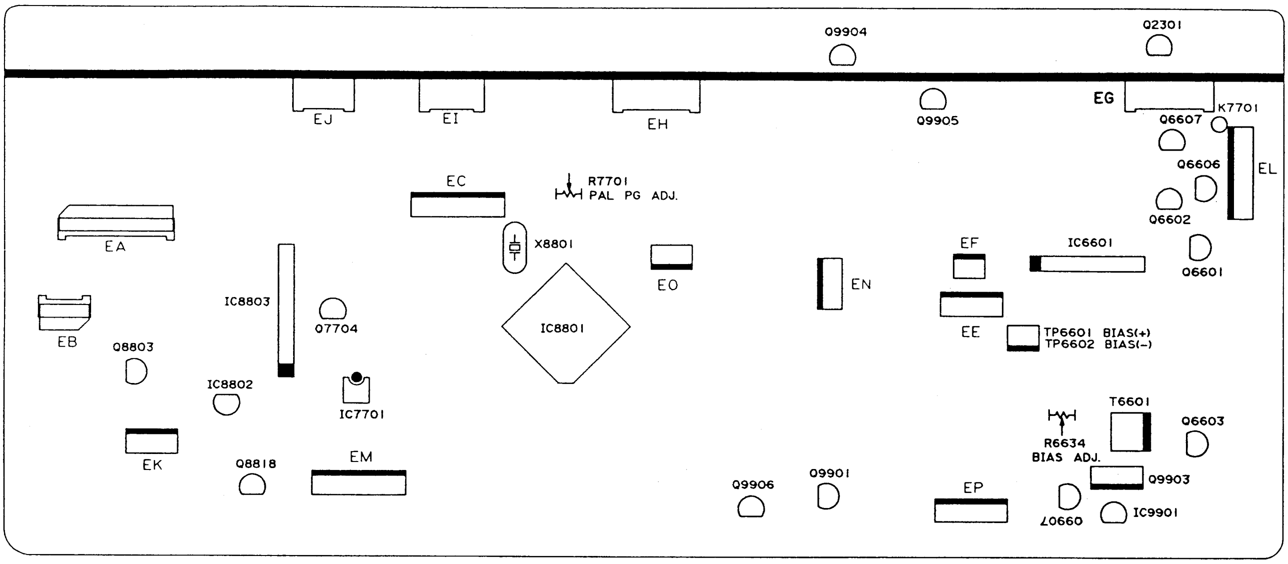

Q9904
Q2301
EJ
EI
EH
Q9905
EG
K7701
Q6607
Q6606
EL
EC
R7701
PAL PG ADJ.
Q6602
EA
X8801
EF
IC6601
Q6601
EO
EN
IC8803
Q7704
IC8801
EB
Q8803
EE
TP6601 BIAS(+)
TP6602 BIAS(–)
IC8802
IC7701
T6601
Q6603
R6634
BIAS ADJ.
EK
Q8818
EM
Q9901
Q9906
EP
Q9903
Q9907
IC9901

Figure 2-2.

Adjustment of slow tracking preset

Measuring instrument	Monitor TV
Mode	Recording and playback on self-recording tape.
Input signal	Commercial broadcast or video signal.
Test point	Monitor screen
Adjusting point	Tracking control buttons (+), (–)
Specification	No noise bar on the monitor TV screen.

1. Play back the self-recorded tape in the slow mode.
2. Make the test points TP8201 and TP8202 short-circuited in the A/V Jack PWB.
3. Be sure that the PB mode display (▸) disappears on the screen.
4. Remove the short-circuit.
5. Adjust the tracking control using the TRACKING buttons on the remote controller so that there is no noise on the screen.

Adjustment of still Picture vertical sync

Measuring instrument	Monitor TV
Mode	Still picture playback
Input signal	Self-recording tape
Test point	Monitor screen
Adjusting point	Tracking control buttons (+), (–)
Specification	No noise jitter.

1. Play back the self-recorded tape in the still mode.
2. Using the TRACKING button on the remote controller, make adjustment so that jitter becomes minimum.
3. Now press the STOP button to stop the tape.

■ Y/C CIRCUIT ADJUSTMENT

Adjustment of video E-E level

Measuring instrument	Oscilloscope
Mode	E-E or Record
Input signal	EIA colour bar (1.0Vp-p)
Test point	VIDEO OUT (pin (3) of EL connector)
Control	R2202 E-E level control
Specification	2.0 ± 0.2 Vp-p

1. Connect an oscilloscope to the VIDEO OUT (pin (3) of EL connector).
2. Feed a colour bar signal to the VIDEO IN jack and put the unit in AV input mode.
3. Adjust R2202 so that the signal amplitude is 2.0Vp-p as shown in Figure 2-3. (See Note below)

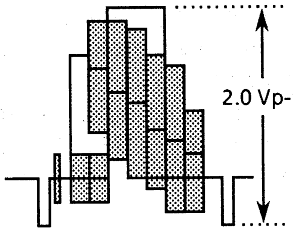


Figure 2-3.

Note:
After this adjustment, check the deviation of FM luminance signal. (Frequency and Deviation adjustment.)

Adjustment of VCO

Measuring instrument	DC Voltmeter
Mode	E-E or Record
Input signal	EIA colour bar (1.0 Vp-p)
Test point	TP5501(Signal), TP5502(GND)
Control	FL5501 VCO
Specification	2.25 ± 0.1V

1. Feed a colour bar signal to the VIDEO IN jack and put the unit in AV input mode.
2. Connect the DC voltmeter to test points TP5501(Sig.) and TP5502 (GND).
3. Adjust FL5501 so that the DC voltmeter reads 2.25 ± 0.1V.

Adjustment of white clip

Measuring instrument	Oscilloscope
Mode	E-E or Record
Input signal	EIA colour bar (1.0Vp-p)
Test point	TP2205(Signal), TP2206(GND)
Control	R2203 white clip control
Specification	190 ± 5% (See note below)

1. Connect the oscilloscope to test points TP2205(Sig.) and TP2206(GND).
2. Feed the colour bar signal to the VIDEO IN jack and put the unit in AV input mode.
3. Adjust R2203 so that the overshoot of the video signal is clipped at 190% as shown in Figure 2-4.

Note:
From sync tip to white peak, the level is 100%.
The white clip level is 90% above the white level.
(There is no dark clip adjustment.)

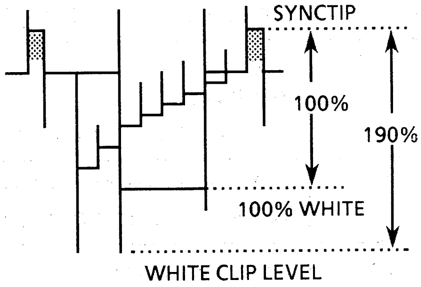


Figure 2-4.

■ Test points layout of Y/C Unit.

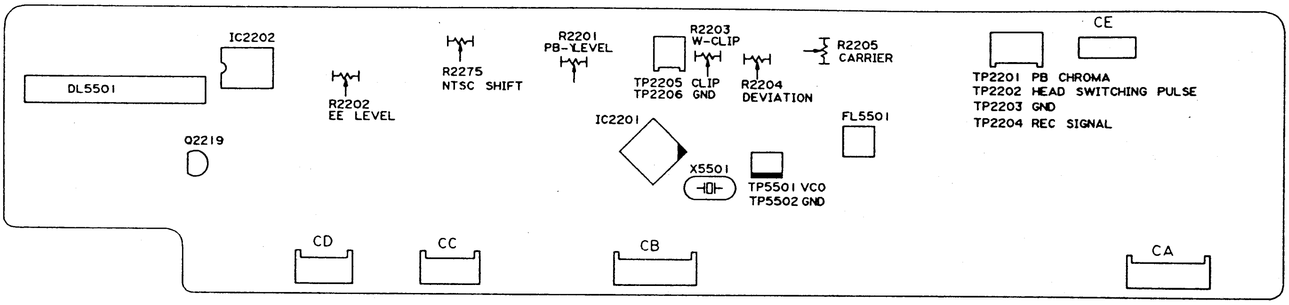

IC2202
DL5501
Q2219
R2202
EE LEVEL
R2275
NTSC SHIFT
R2201
PB-LEVEL
R2203
W-CLIP
TP2205 CLIP
TP2206 GND
R2204
DEVIATION
R2205
CARRIER
IC2201
X5501
TP5501 VCO
TP5502 GND
FL5501
CE
TP2201 PB CHROMA
TP2202 HEAD SWITCHING PULSE
TP2203 GND
TP2204 REC SIGNAL
CD
CC
CB
CA

Figure 2-5.

Adjustment of FM carrier frequency and deviation

Measuring instrument	Frequency counter Oscilloscope
Mode	Record/Playback
Input signal	EIA colour bar (1.0Vp-p)
Test point	TP2204 VIDEO OUT (pin (3) of EL connector)
Control	R2205 FM carrier control R2204 Deviation control
Specifications	3.8 ± 0.05MHz 2.0 ± 0.1Vp-p

1. Be sure that R2202 (E-E LEVEL) has been correctly adjusted.
2. Connect an oscilloscope to the VIDEO OUT (pin (3) of EL connector).
3. Connect a frequency counter to test points TP2204.
4. Put the unit in AV input mode. Do not feed any signal to the VIDEO IN jack. (Disconnect any cable from video input terminal.)
5. Under this condition, adjust R2205 so that the frequency counter reads 3.8MHz.
6. Feed the EIA standard colour bar signal to the VIDEO IN jack and adjust R2204 so that the frequency counter reads 4.3MHz.
7. Repeat step 5 thru 7 a few times.
8. Under this condition record the EIA colour bar on tape, rewind and playback.
9. Make sure that the amplitude of the playback colour bar signal is 2.0 ± 0.1 Vp-p as shown in Figure 2-6. If it is out of specified value, check the PLAYBACK LEVEL (R2201) and retry this adjustment.

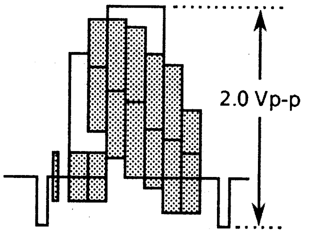


Figure 2-6.

Adjustment of playback level

Measuring instrument	Oscilloscope
Mode	Playback
Cassette	Alignment tape (VROCPSV)
Test point	VIDEO OUT (pin (3) of EL connector)
Control	R2201 playback level control
Specifications	2.0 ± 0.2 Vp-p

1. Connect an oscilloscope to the VIDEO OUT (pin (3) of EL connector).
2. Play the colour bar portion of the alignment tape and adjust R2201 so that the signal amplitude is 2.0Vp-p as shown in Figure 2-7.

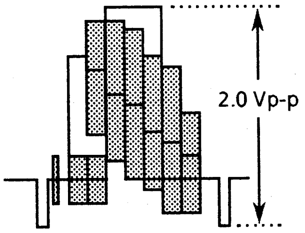


Figure 2-7.

■ AUDIO CIRCUIT

Checking of audio play-back level

Measuring instrument	AC milli-voltmeter
Mode	Playback
Input signal	Alignment tape.(VROCPSV) (1kHz level adjusting signal.)
Test point	AUDIO OUT (pin (7) of EL connector)
Specification	-9 ± 2dBs (0.6~1.0Vp-p)

1. Playback the Alignment tape. (VROCPSV 1kHz level adjusting signal)
2. Connect an AC milli-voltmeter to the AUDIO OUT (pin (7) of EL connector).
3. Make sure that the output level is - 9 ± 2dBs.

Checking of audio record level

Measuring instrument	AC milli-voltmeter or Oscilloscope
Mode	Record/Playback
Input signal	1kHz, -8dBs (0.87Vp-p)
Test point	AUDIO OUT (pin (7) of EL connector)
Specification	-8 ± 2dBs (0.7~1.1Vp-p)

1. Connect an AC milli-voltmeter to the AUDIO OUT (pin (7) of EL connector).
2. Feed the audio signal shown in table to the AUDIO IN jack.
3. Make the self-recording and playback of the signal.
4. Make sure that the AUDIO OUT level is as specified. If it is out of specified value, verify the bias current (ADJUSTMENT OF AUDIO BIAS CURRENT below).

Adjustment of audio bias current

Measuring instrument	AC milli-voltmeter or Oscilloscope
Mode	Record
Input signal	Not required
Test point	TP6601(+) ~ TP6602(-)
Control	R6634
Specification	2.6 ± 0.1mVrms (7.6 ± 0.3mVp-p)

1. Connect an AC milli-voltmeter to test points TP6601(+) and TP6602(-).
(Use TP6602 for ground lead.)
2. Set the unit in recording mode.
3. Adjust R6634 so that the signal amplitude is 2.6mVrms.

Checking of erase voltage and oscillation frequency

Measuring instrument	Oscilloscope
Mode	Record
Test point	Full erase head
Control	T6601
Specification	70 ± 5kHz, 40Vp-p or greater

1. Put the unit in record mode.
2. Connect an oscilloscope across the full erase head.
3. Make sure the erase voltage across the full erase head is approx. 40Vp-p or more and frequency is 70 ± 5kHz.

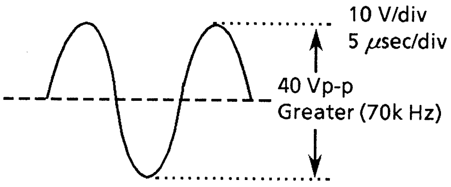


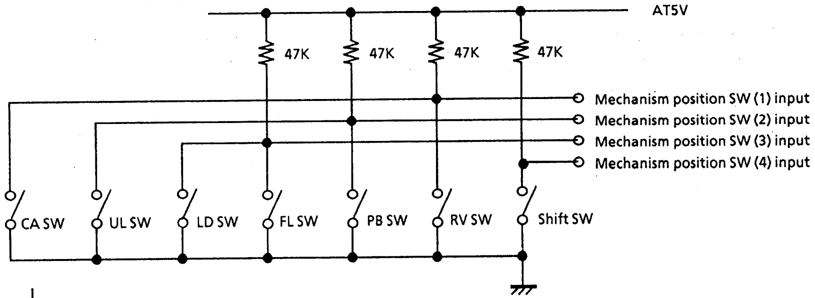
Figure 2-8.

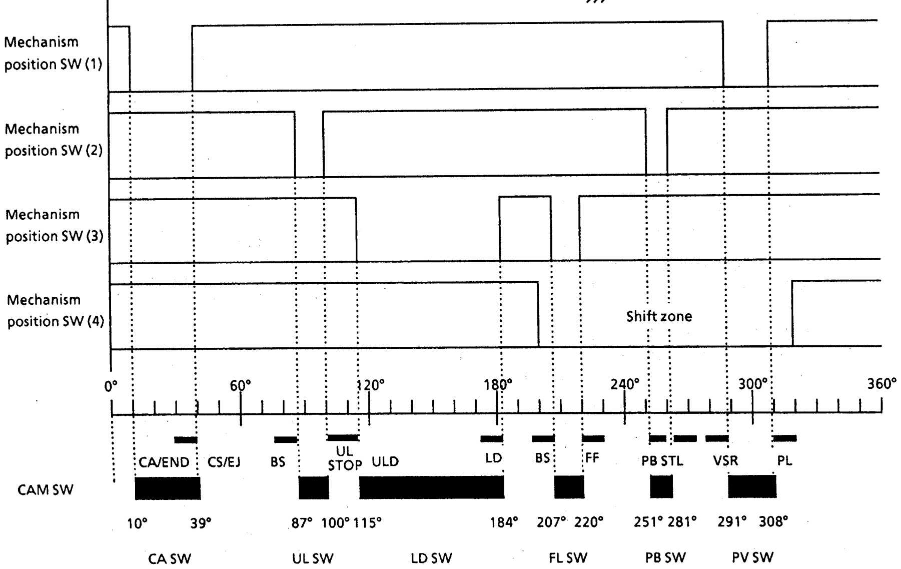
FLOW CHART AND TROUBLESHOOTING OF VCR SECTION

MECHANISM OPERATION FLOWCHART

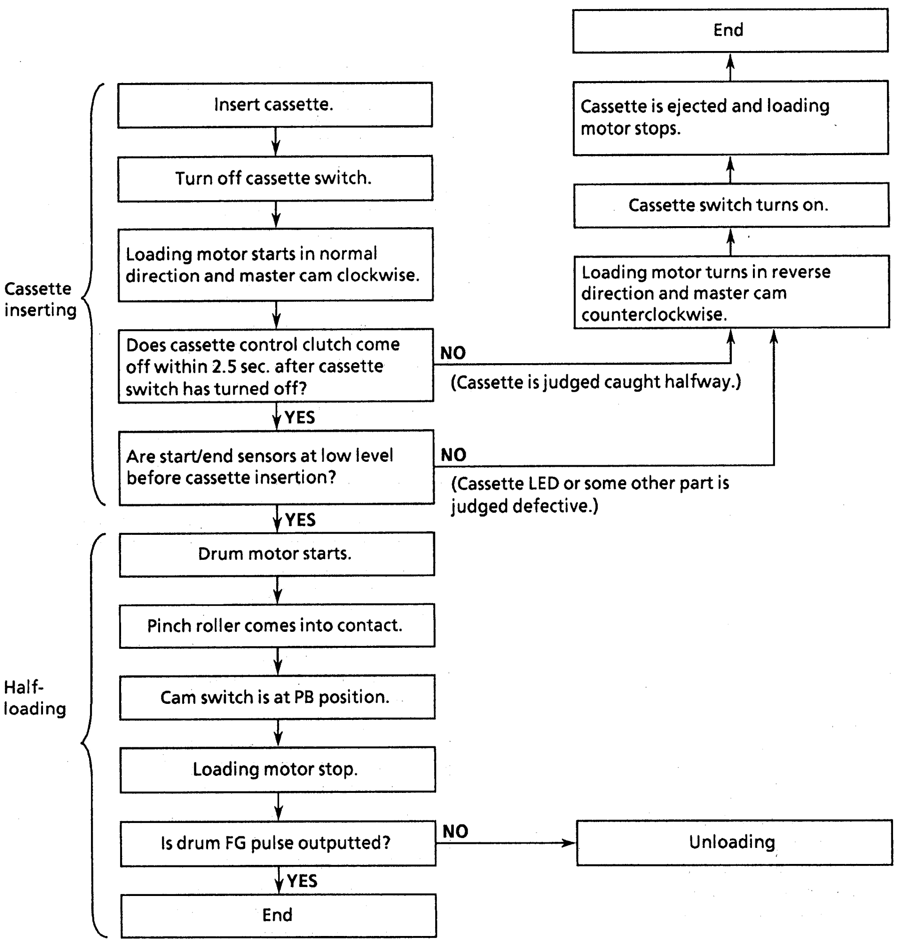
- * This flowchart describes the outline of the mechanism's operation, but does not give its details.
- * Function of cam switch bit reading.
  The on/off of cam switch is cam position switch (1~4) input signals in conditions as shown in below.

	CA SW 'ON'	UL SW 'ON'	LD SW 'ON'	FL SW 'ON'	PB SW 'ON'	RV SW 'ON'	ALL SW 'OFF'
Mechanism position SW (1) input	L	H	H	H	H	L	H
Mechanism position SW (2) input	H	L	H	H	L	H	H
Mechanism position SW (3) input	H	H	L	L	H	H	H
Mechanism position SW (4) input	H	H	H	L	L	L	H

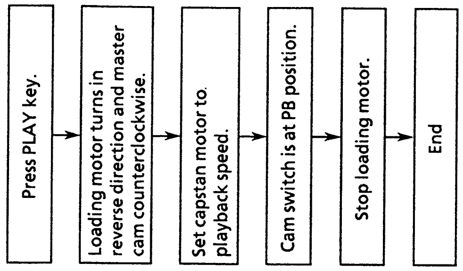

AT5V
47K
47K
47K
47K
Mechanism position SW (1) input
Mechanism position SW (2) input
Mechanism position SW (3) input
Mechanism position SW (4) input
CA SW
UL SW
LD SW
FL SW
PB SW
RV SW
Shift SW



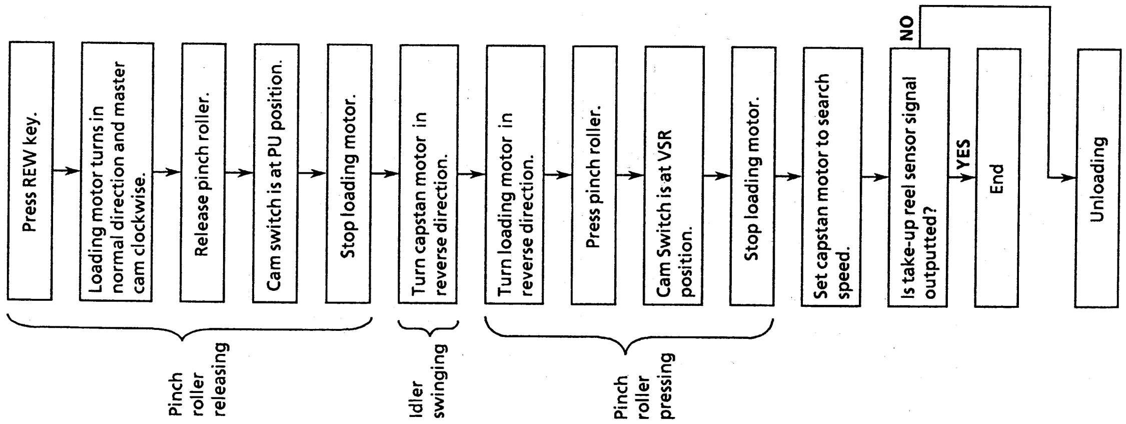
CASSETTE INSERTION → STOP


Cassette inserting
Insert cassette.
Turn off cassette switch.
Loading motor starts in normal direction and master cam clockwise.
Does cassette control clutch come off within 2.5 sec. after cassette switch has turned off?
NO
(Cassette is judged caught halfway.)
YES
Are start/end sensors at low level before cassette insertion?
NO
(Cassette LED or some other part is judged defective.)
YES
Loading motor turns in reverse direction and master cam counterclockwise.
Cassette switch turns on.
Cassette is ejected and loading motor stops.
End
Half-loading
Drum motor starts.
Pinch roller comes into contact.
Cam switch is at PB position.
Loading motor stop.
Is drum FG pulse outputted?
NO
Unloading
YES
End

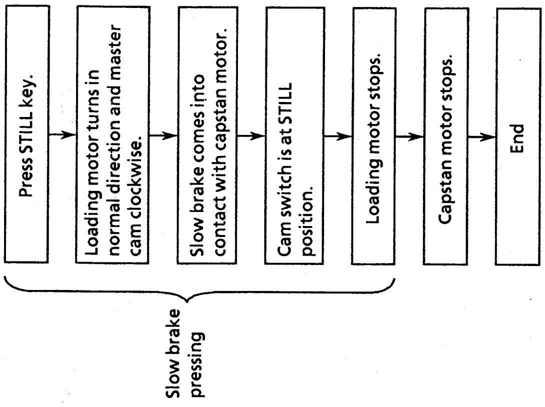
VSR → PLAY


Press PLAY key.
Loading motor turns in reverse direction and master cam counterclockwise.
Set capstan motor to playback speed.
Cam switch is at PB position.
Stop loading motor.
End

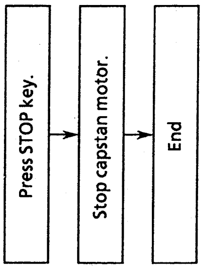
PLAY → VSR


Press REW key.
Loading motor turns in normal direction and master cam clockwise.
Release pinch roller.
Cam switch is at PU position.
Stop loading motor.
Turn capstan motor in reverse direction.
Turn loading motor in reverse direction.
Press pinch roller.
Cam Switch is at VSR position.
Stop loading motor.
Set capstan motor to search speed.
Is take-up reel sensor signal outputted?
YES
End
NO
Unloading
Pinch roller releasing
Idler swinging
Pinch roller pressing

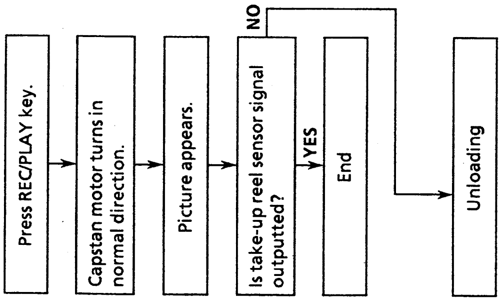
PLAY → STILL


Press STILL key.
Loading motor turns in normal direction and master cam clockwise.
Slow brake comes into contact with capstan motor.
Cam switch is at STILL position.
Loading motor stops.
Capstan motor stops.
End
Slow brake pressing

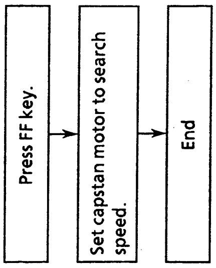
REC/PLAY → STOP


Press STOP key.
Stop capstan motor.
End

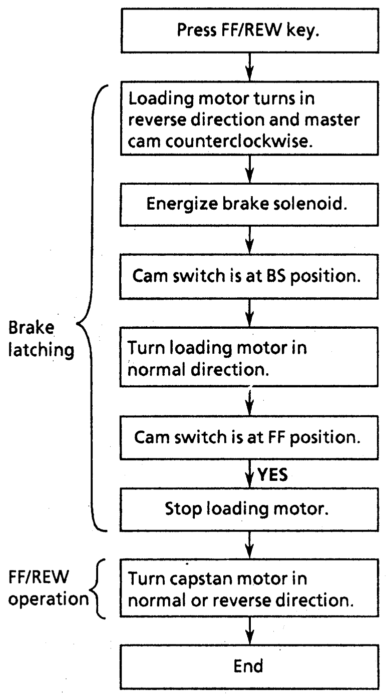
STOP → REC/PLAY


Press REC/PLAY key.
Capstan motor turns in normal direction.
Picture appears.
Is take-up reel sensor signal outputted?
YES
End
NO
Unloading

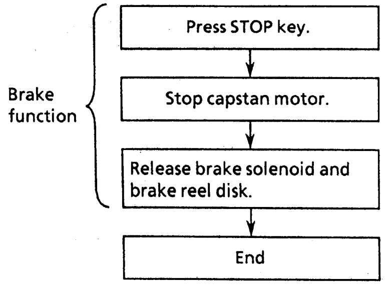
PLAY → VSF


Press FF key.
Set capstan motor to search speed.
End

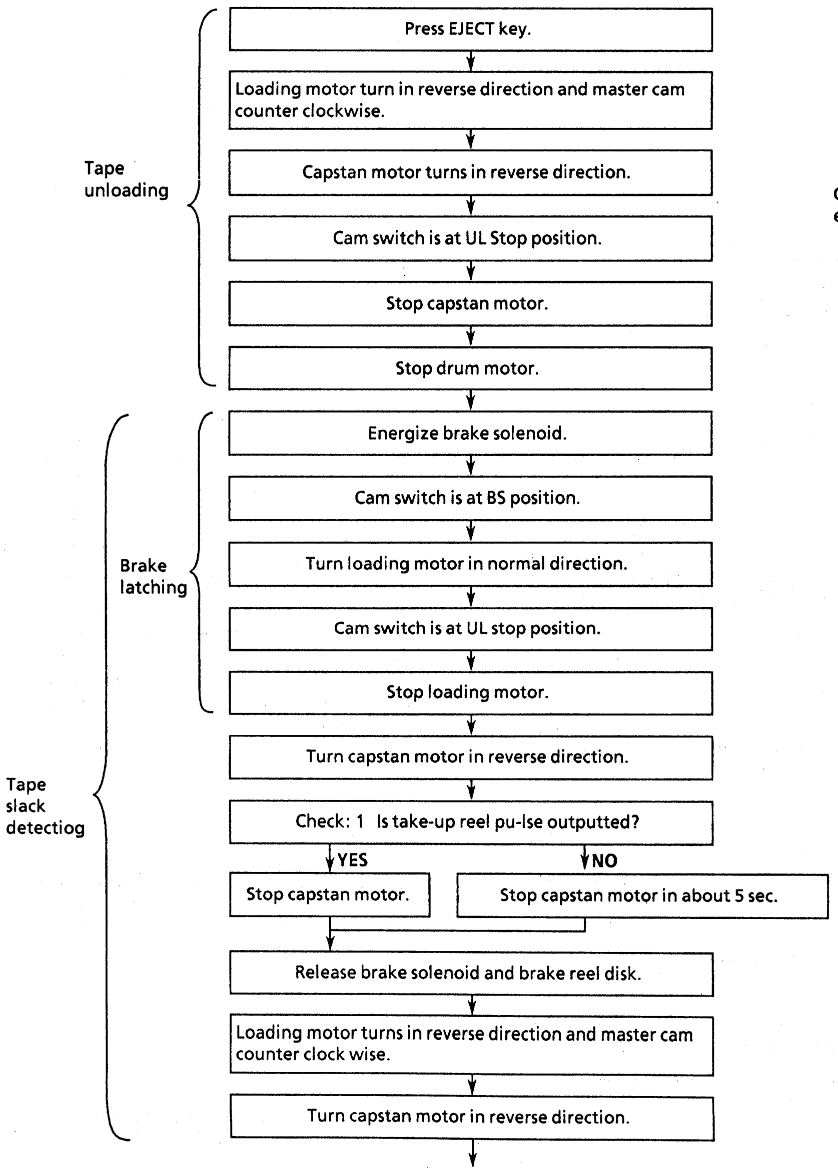
STOP → FF/REW

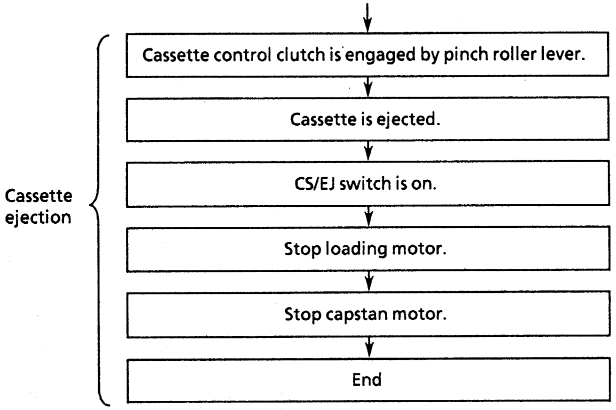

Press FF/REW key.
Loading motor turns in reverse direction and master cam counterclockwise.
Energize brake solenoid.
Cam switch is at BS position.
Turn loading motor in normal direction.
Cam switch is at FF position.
YES
Stop loading motor.
Turn capstan motor in normal or reverse direction.
End
Brake latching
FF/REW operation

FF/REW → STOP


Press STOP key.
Stop capstan motor.
Release brake solenoid and brake reel disk.
End
Brake function

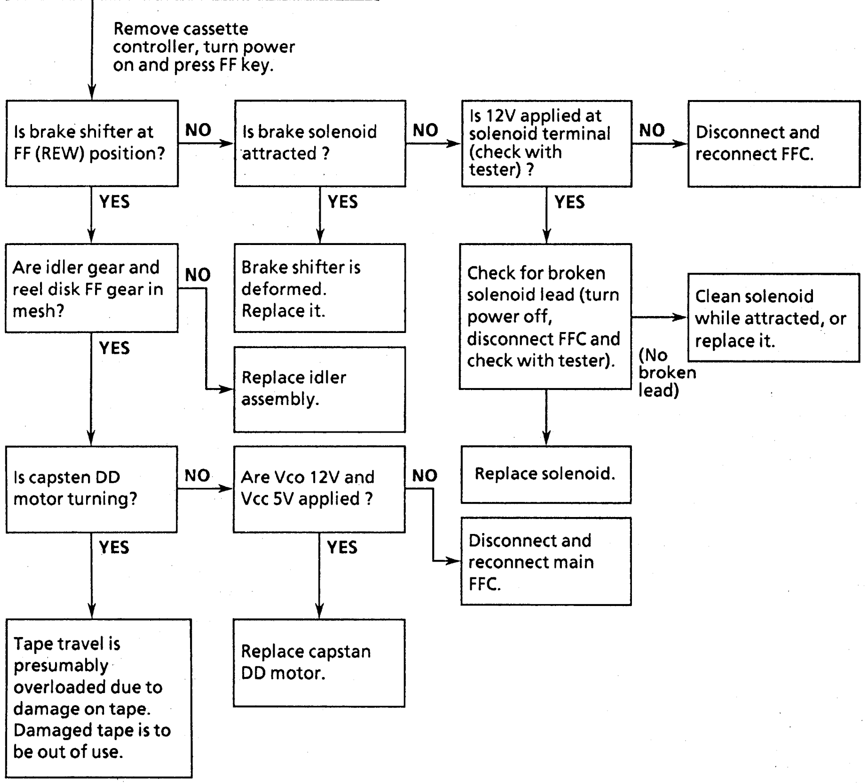
STOP →CASSETTE EJECT


Press EJECT key.
Loading motor turn in reverse direction and master cam counter clockwise.
Capstan motor turns in reverse direction.
Cam switch is at UL Stop position.
Stop capstan motor.
Stop drum motor.
Energize brake solenoid.
Cam switch is at BS position.
Turn loading motor in normal direction.
Cam switch is at UL stop position.
Stop loading motor.
Turn capstan motor in reverse direction.
Check: 1 Is take-up reel pu-lse outputted?
YES
NO
Stop capstan motor.
Stop capstan motor in about 5 sec.
Release brake solenoid and brake reel disk.
Loading motor turns in reverse direction and master cam counter clock wise.
Turn capstan motor in reverse direction.
Tape unloading
Brake latching
Tape slack detectiog

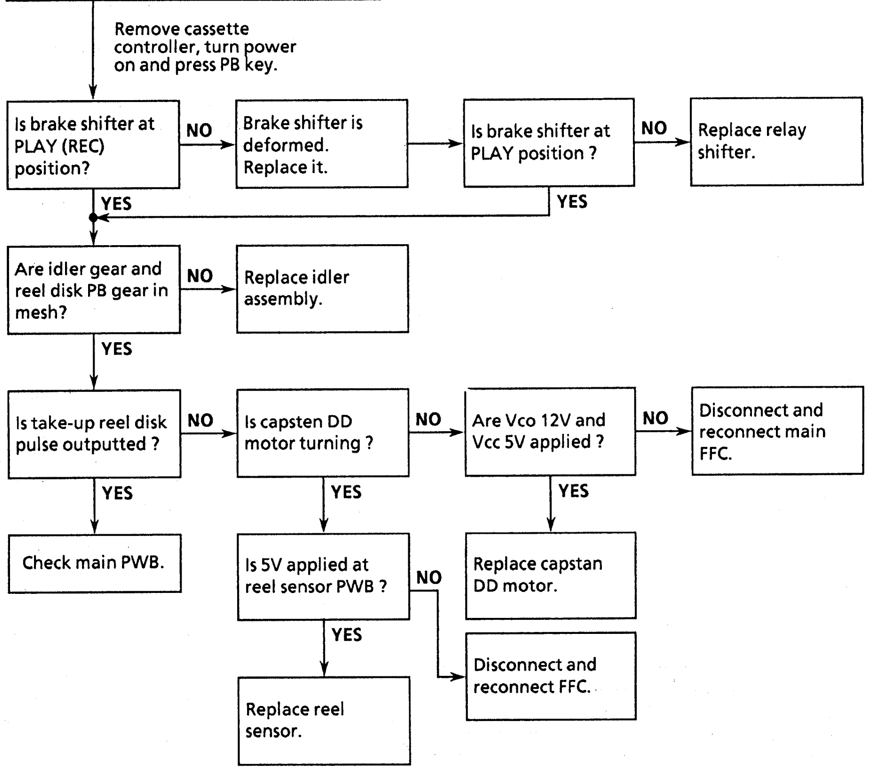

Cassette control clutch is engaged by pinch roller lever.
Cassette is ejected.
CS/EJ switch is on.
Stop loading motor.
Stop capstan motor.
End
Cassette ejection

MECHANISM TROUBLESHOOTING

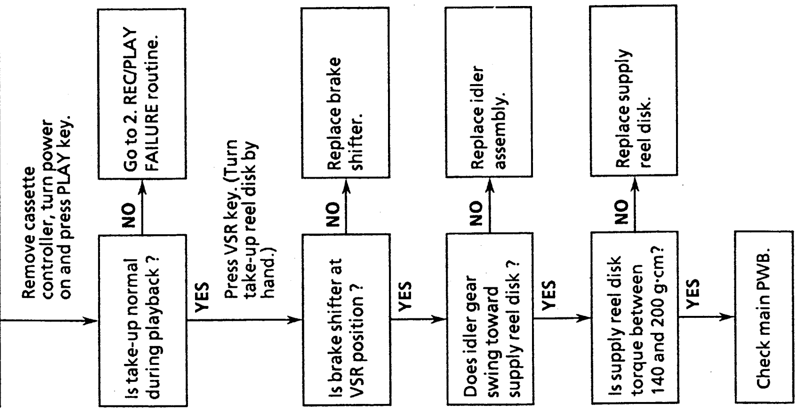
1. FF/REW FAILURE (NO TAPE WINDING)


Remove cassette controller, turn power on and press FF key.
Is brake shifter at FF (REW) position?
NO
Is brake solenoid attracted ?
NO
Is 12V applied at solenoid terminal (check with tester) ?
NO
Disconnect and reconnect FFC.
YES
Brake shifter is deformed. Replace it.
YES
Check for broken solenoid lead (turn power off, disconnect FFC and check with tester).
(No broken lead)
Clean solenoid while attracted, or replace it.
Replace solenoid.
YES
Are idler gear and reel disk FF gear in mesh?
NO
Replace idler assembly.
YES
Is capsten DD motor turning?
NO
Are Vco 12V and Vcc 5V applied ?
NO
Disconnect and reconnect main FFC.
YES
Replace capstan DD motor.
YES
Tape travel is presumably overloaded due to damage on tape. Damaged tape is to be out of use.

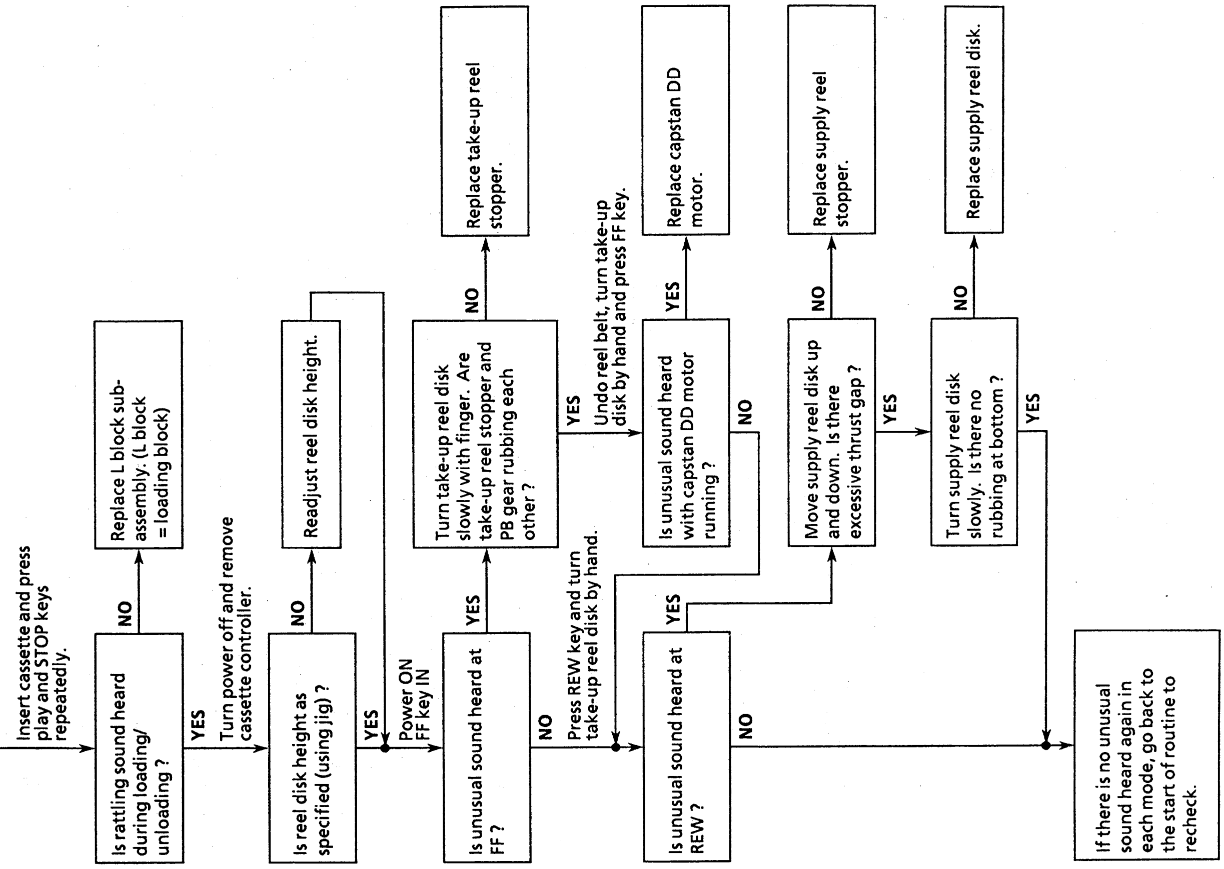
2. REC/PLAY FAILURE (MODE RELEASE)


Remove cassette controller, turn power on and press PB key.
Is brake shifter at PLAY (REC) position?
NO
Brake shifter is deformed. Replace it.
Is brake shifter at PLAY position ?
NO
Replace relay shifter.
YES
YES
Are idler gear and reel disk PB gear in mesh?
NO
Replace idler assembly.
YES
Is take-up reel disk pulse outputted ?
NO
Is capsten DD motor turning ?
NO
Are Vco 12V and Vcc 5V applied ?
NO
Disconnect and reconnect main FFC.
YES
Replace capstan DD motor.
YES
Is 5V applied at reel sensor PWB ?
NO
Disconnect and reconnect FFC.
YES
Replace reel sensor.
YES
Check main PWB.

3. WINDING FAILURE AT VSR


Remove cassette controller, turn power on and press PLAY key.
Is take-up normal during playback ?
NO
Go to 2. REC/PLAY FAILURE routine.
YES
Press VSR key. (Turn take-up reel disk by hand.)
Is brake shifter at VSR position ?
NO
Replace brake shifter.
YES
Does idler gear swing toward supply reel disk ?
NO
Replace idler assembly.
YES
Is supply reel disk torque between 140 and 200 g·cm?
NO
Replace supply reel disk.
YES
Check main PWB.

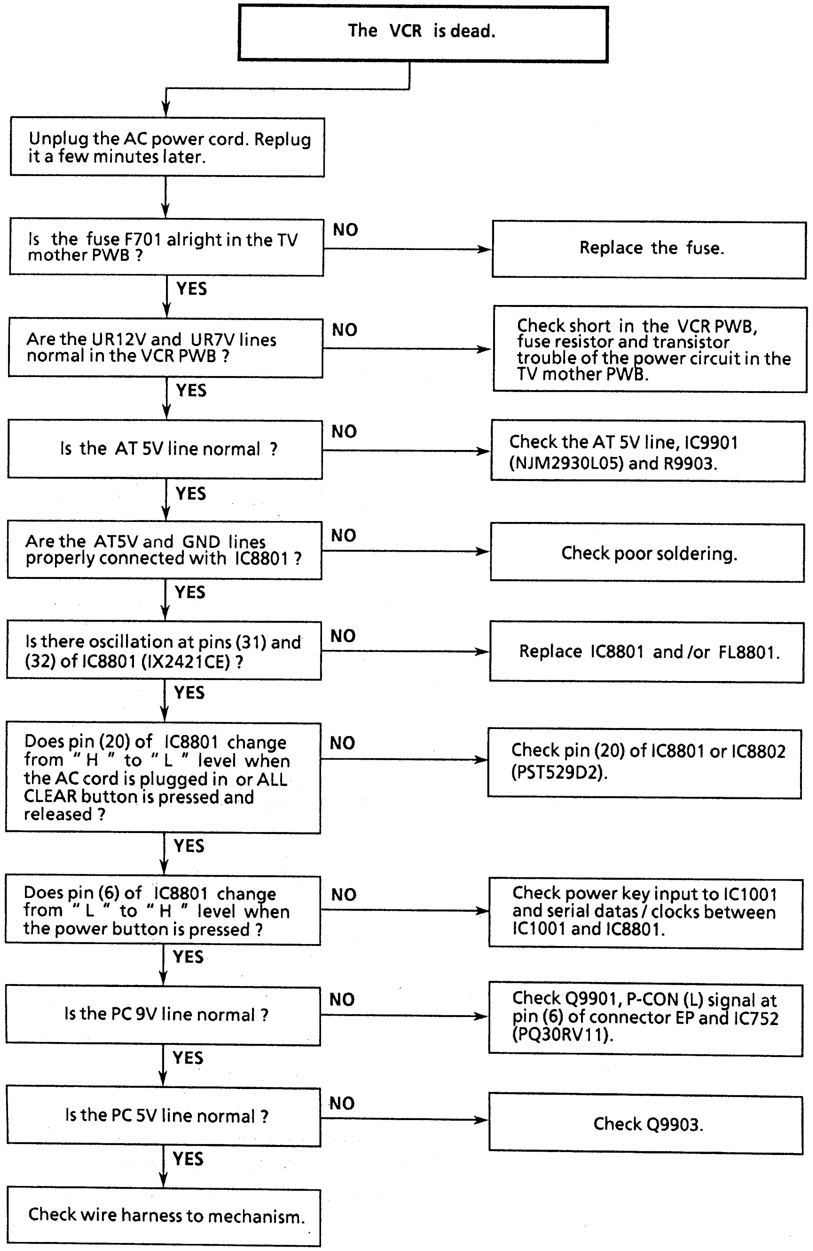
4. UNUSUAL SOUND IN EACH MODE


Insert cassette and press play and STOP keys repeatedly.
Is rattling sound heard during loading/unloading ?
NO
Replace L block sub-assembly. (L block = loading block)
YES
Turn power off and remove cassette controller.
Is reel disk height as specified (using jig) ?
NO
Readjust reel disk height.
YES
Power ON
FF key IN
Is unusual sound heard at FF ?
YES
Turn take-up reel disk slowly with finger. Are take-up reel stopper and PB gear rubbing each other ?
NO
Replace take-up reel stopper.
YES
Undo reel belt, turn take-up disk by hand and press FF key.
Is unusual sound heard with capstan DD motor running ?
YES
Replace capstan DD motor.
NO
NO
Press REW key and turn take-up reel disk by hand.
Is unusual sound heard at REW ?
YES
Move supply reel disk up and down. Is there excessive thrust gap ?
NO
Replace supply reel stopper.
YES
Turn supply reel disk slowly. Is there no rubbing at bottom ?
NO
Replace supply reel disk.
YES
NO
If there is no unusual sound heard again in each mode, go back to the start of routine to recheck.

ELECTRICAL TROUBLESHOOTING

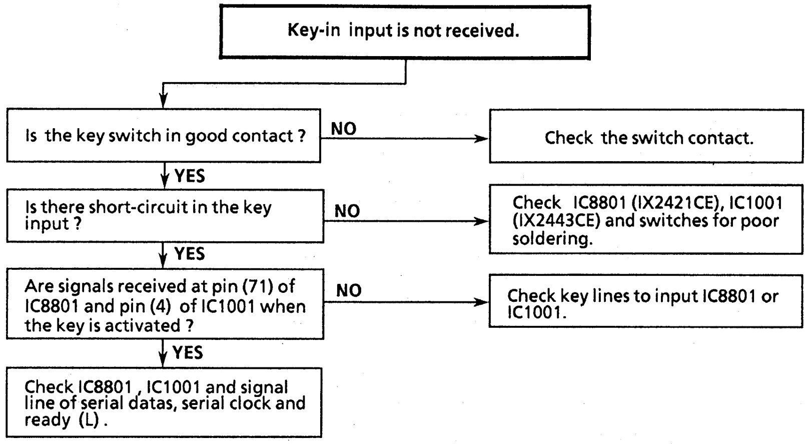
VCR POWER TROUBLESHOOTING

FLOW CHART NO. 1-1


The VCR is dead.
Unplug the AC power cord. Replug it a few minutes later.
Is the fuse F701 alright in the TV mother PWB ?
NO
Replace the fuse.
YES
Are the UR12V and UR7V lines normal in the VCR PWB ?
NO
Check short in the VCR PWB, fuse resistor and transistor trouble of the power circuit in the TV mother PWB.
YES
Is the AT 5V line normal ?
NO
Check the AT 5V line, IC9901 (NJM2930L05) and R9903.
YES
Are the AT5V and GND lines properly connected with IC8801 ?
NO
Check poor soldering.
YES
Is there oscillation at pins (31) and (32) of IC8801 (IX2421CE) ?
NO
Replace IC8801 and /or FL8801.
YES
Does pin (20) of IC8801 change from " H " to " L " level when the AC cord is plugged in or ALL CLEAR button is pressed and released ?
NO
Check pin (20) of IC8801 or IC8802 (PST529D2).
YES
Does pin (6) of IC8801 change from " L " to " H " level when the power button is pressed ?
NO
Check power key input to IC1001 and serial datas / clocks between IC1001 and IC8801.
YES
Is the PC 9V line normal ?
NO
Check Q9901, P-CON (L) signal at pin (6) of connector EP and IC752 (PQ30RV11).
YES
Is the PC 5V line normal ?
NO
Check Q9903.
YES
Check wire harness to mechanism.

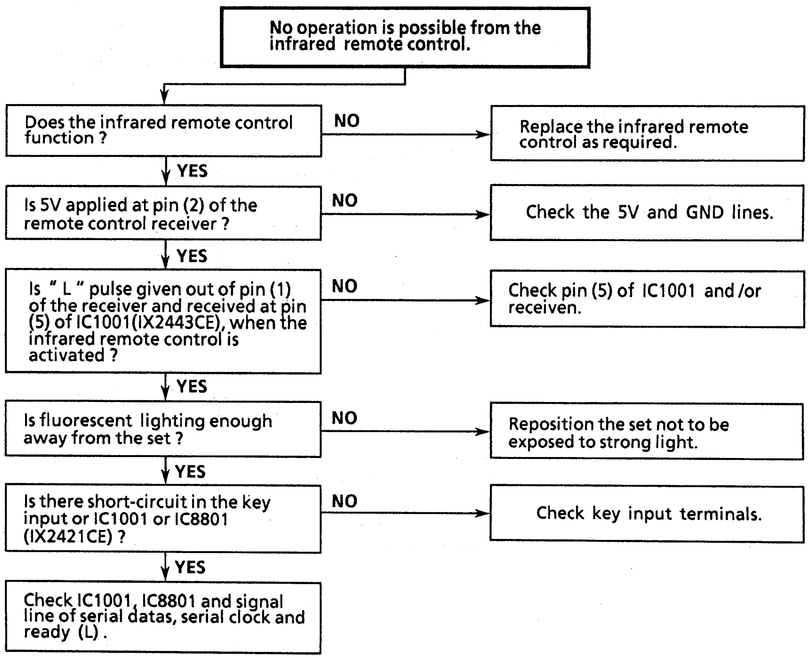
KEY-IN TROUBLESHOOTING

FLOW CHART NO. 1-2


Key-in input is not received.
Is the key switch in good contact ?
NO
Check the switch contact.
YES
Is there short-circuit in the key input ?
NO
Check IC8801 (IX2421CE), IC1001 (IX2443CE) and switches for poor soldering.
YES
Are signals received at pin (71) of IC8801 and pin (4) of IC1001 when the key is activated ?
NO
Check key lines to input IC8801 or IC1001.
YES
Check IC8801 , IC1001 and signal line of serial datas, serial clock and ready (L) .

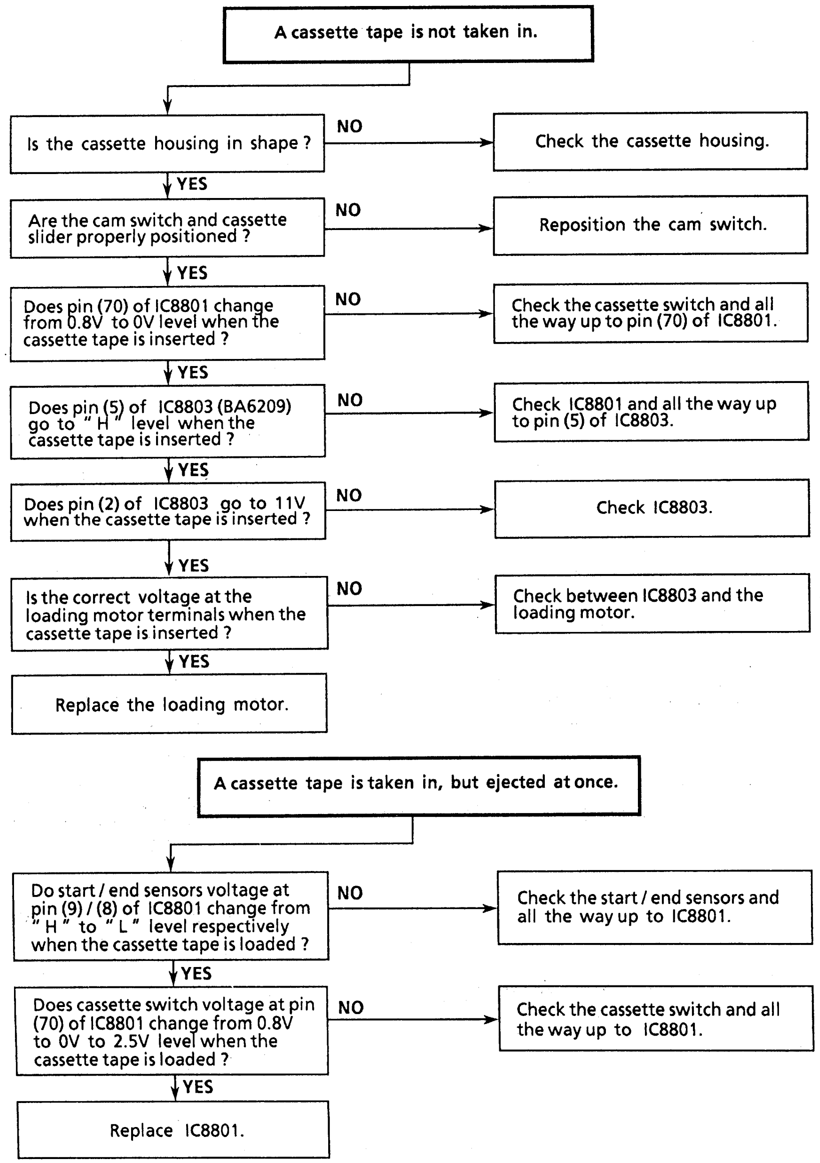
INFRARED R/C TROUBLESHOOTING

FLOW CHART NO. 1-3


No operation is possible from the infrared remote control.
Does the infrared remote control function ?
NO
Replace the infrared remote control as required.
YES
Is 5V applied at pin (2) of the remote control receiver ?
NO
Check the 5V and GND lines.
YES
Is " L " pulse given out of pin (1) of the receiver and received at pin (5) of IC1001(IX2443CE), when the infrared remote control is activated ?
NO
Check pin (5) of IC1001 and /or receiven.
YES
Is fluorescent lighting enough away from the set ?
NO
Reposition the set not to be exposed to strong light.
YES
Is there short-circuit in the key input or IC1001 or IC8801 (IX2421CE) ?
NO
Check key input terminals.
YES
Check IC1001, IC8801 and signal line of serial datas, serial clock and ready (L) .

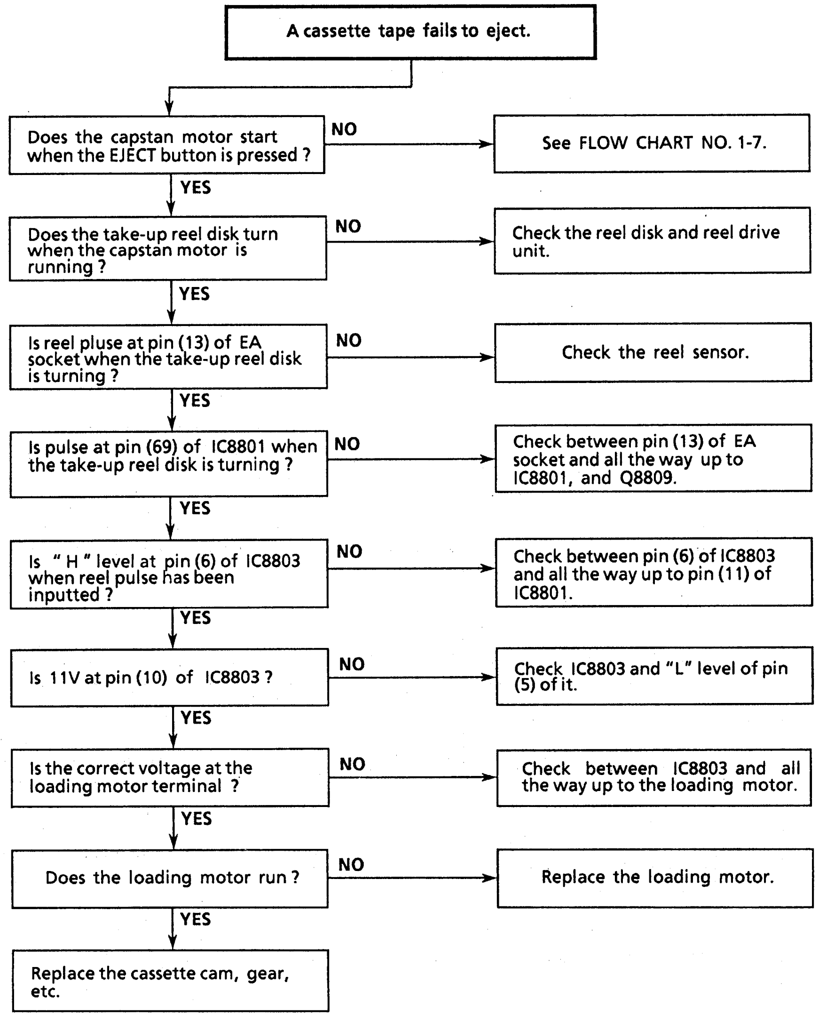
CASSETTE CONTROL TROUBLESHOOTING

FLOW CHART NO. 1-4


A cassette tape is not taken in.
Is the cassette housing in shape ?
NO
Check the cassette housing.
YES
Are the cam switch and cassette slider properly positioned ?
NO
Reposition the cam switch.
YES
Does pin (70) of IC8801 change from 0.8V to 0V level when the cassette tape is inserted ?
NO
Check the cassette switch and all the way up to pin (70) of IC8801.
YES
Does pin (5) of IC8803 (BA6209) go to " H " level when the cassette tape is inserted ?
NO
Check IC8801 and all the way up to pin (5) of IC8803.
YES
Does pin (2) of IC8803 go to 11V when the cassette tape is inserted ?
NO
Check IC8803.
YES
Is the correct voltage at the loading motor terminals when the cassette tape is inserted ?
NO
Check between IC8803 and the loading motor.
YES
Replace the loading motor.
A cassette tape is taken in, but ejected at once.
Do start / end sensors voltage at pin (9) / (8) of IC8801 change from " H " to " L " level respectively when the cassette tape is loaded ?
NO
Check the start / end sensors and all the way up to IC8801.
YES
Does cassette switch voltage at pin (70) of IC8801 change from 0.8V to 0V to 2.5V level when the cassette tape is loaded ?
NO
Check the cassette switch and all the way up to IC8801.
YES
Replace IC8801.

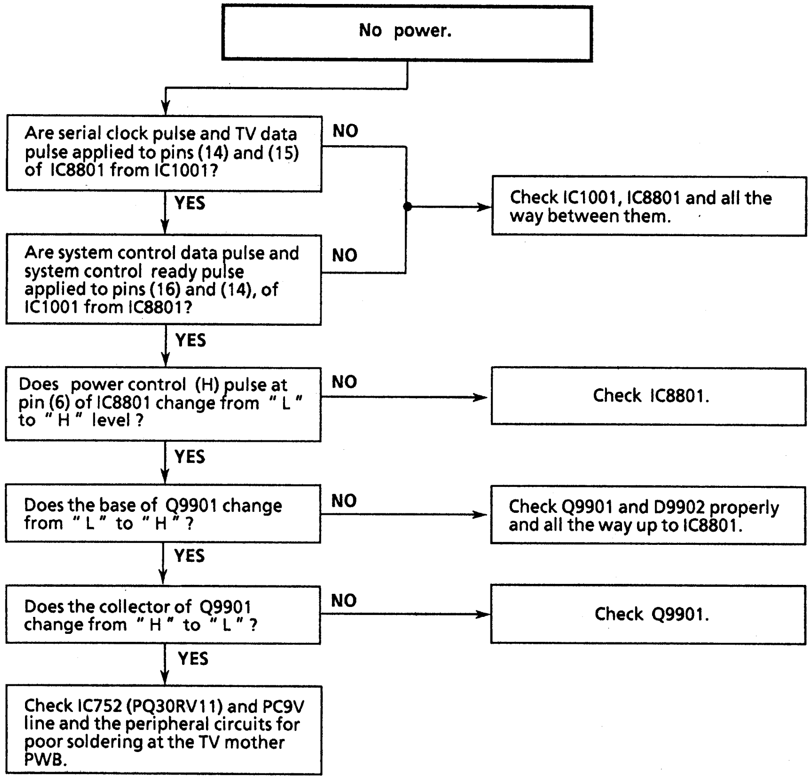
LOADING MOTOR AND EJECT TROUBLESHOOTING

FLOW CHART NO. 1-5


A cassette tape fails to eject.
Does the capstan motor start when the EJECT button is pressed ?
NO
See FLOW CHART NO. 1-7.
YES
Does the take-up reel disk turn when the capstan motor is running ?
NO
Check the reel disk and reel drive unit.
YES
Is reel pluse at pin (13) of EA socket when the take-up reel disk is turning ?
NO
Check the reel sensor.
YES
Is pulse at pin (69) of IC8801 when the take-up reel disk is turning ?
NO
Check between pin (13) of EA socket and all the way up to IC8801, and Q8809.
YES
Is " H " level at pin (6) of IC8803 when reel pulse has been inputted ?
NO
Check between pin (6) of IC8803 and all the way up to pin (11) of IC8801.
YES
Is 11V at pin (10) of IC8803 ?
NO
Check IC8803 and "L" level of pin (5) of it.
YES
Is the correct voltage at the loading motor terminal ?
NO
Check between IC8803 and all the way up to the loading motor.
YES
Does the loading motor run ?
NO
Replace the loading motor.
YES
Replace the cassette cam, gear, etc.

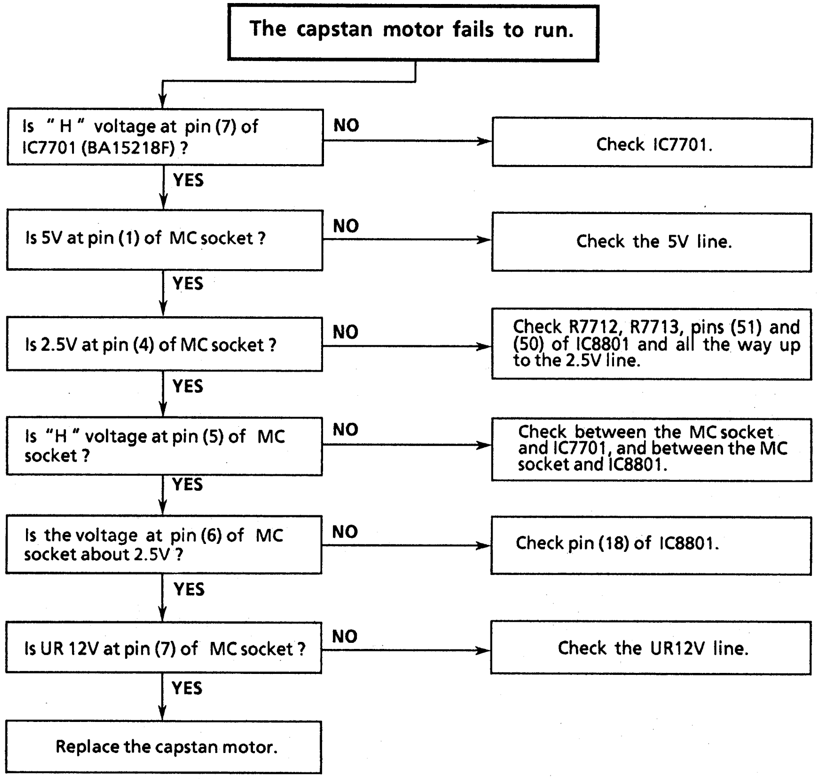
SYSTEM CONTROL TROUBLESHOOTING

FLOW CHART NO. 1-6


No power.
Are serial clock pulse and TV data pulse applied to pins (14) and (15) of IC8801 from IC1001?
NO
YES
Are system control data pulse and system control ready pulse applied to pins (16) and (14), of IC1001 from IC8801?
NO
Check IC1001, IC8801 and all the way between them.
YES
Does power control (H) pulse at pin (6) of IC8801 change from " L " to " H " level ?
NO
Check IC8801.
YES
Does the base of Q9901 change from " L " to " H " ?
NO
Check Q9901 and D9902 properly and all the way up to IC8801.
YES
Does the collector of Q9901 change from " H " to " L " ?
NO
Check Q9901.
YES
Check IC752 (PQ30RV11) and PC9V line and the peripheral circuits for poor soldering at the TV mother PWB.

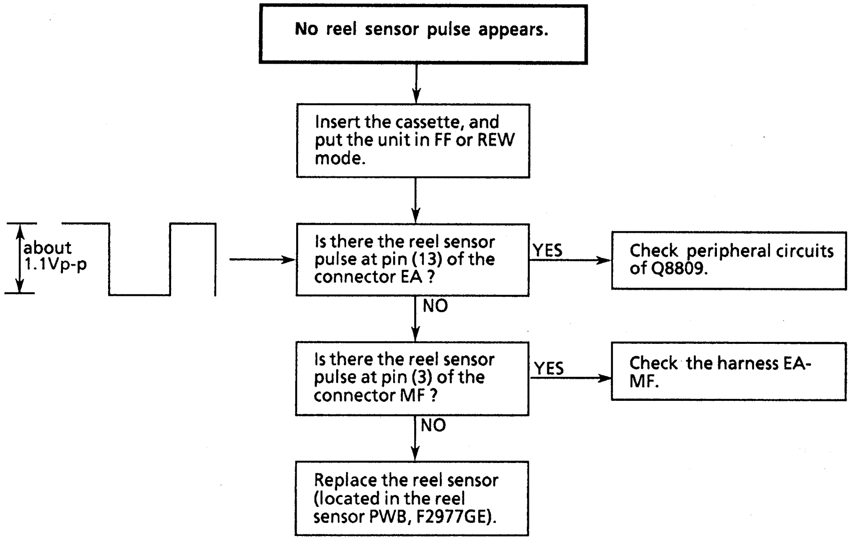
CAPSTAN MOTOR TROUBLESHOOTING

FLOW CHART NO. 1-7


The capstan motor fails to run.
Is " H " voltage at pin (7) of IC7701 (BA15218F) ?
NO
Check IC7701.
YES
Is 5V at pin (1) of MC socket ?
NO
Check the 5V line.
YES
Is 2.5V at pin (4) of MC socket ?
NO
Check R7712, R7713, pins (51) and (50) of IC8801 and all the way up to the 2.5V line.
YES
Is "H" voltage at pin (5) of MC socket ?
NO
Check between the MC socket and IC7701, and between the MC socket and IC8801.
YES
Is the voltage at pin (6) of MC socket about 2.5V ?
NO
Check pin (18) of IC8801.
YES
Is UR 12V at pin (7) of MC socket ?
NO
Check the UR12V line.
YES
Replace the capstan motor.

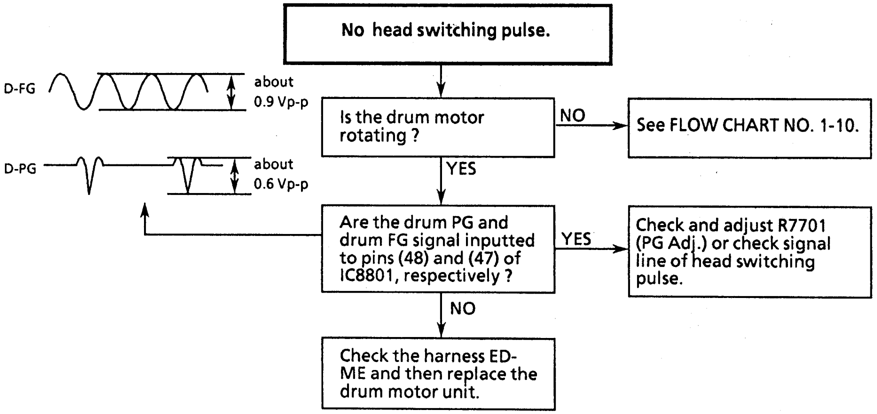
TAKE-UP REEL PULSE GENERATOR TROUBLESHOOTING

FLOW CHART NO. 1-8


No reel sensor pulse appears.
Insert the cassette, and put the unit in FF or REW mode.
about 1.1Vp-p
Is there the reel sensor pulse at pin (13) of the connector EA ?
YES
Check peripheral circuits of Q8809.
NO
Is there the reel sensor pulse at pin (3) of the connector MF ?
YES
Check the harness EA-MF.
NO
Replace the reel sensor (located in the reel sensor PWB, F2977GE).

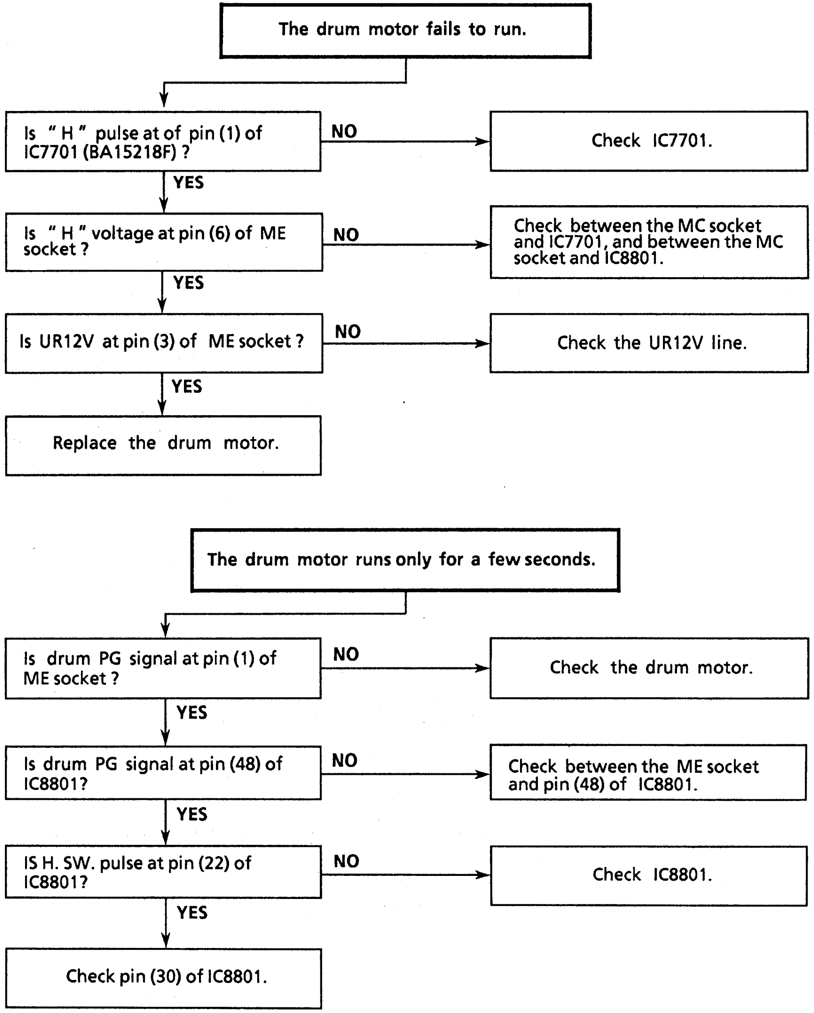
HEAD SWITCHING PULSE TROUBLESHOOTING

FLOW CHART NO. 1-9


No head switching pulse.
D-FG
about 0.9 Vp-p
D-PG
about 0.6 Vp-p
Is the drum motor rotating ?
NO
See FLOW CHART NO. 1-10.
YES
Are the drum PG and drum FG signal inputted to pins (48) and (47) of IC8801, respectively ?
YES
Check and adjust R7701 (PG Adj.) or check signal line of head switching pulse.
NO
Check the harness ED-ME and then replace the drum motor unit.

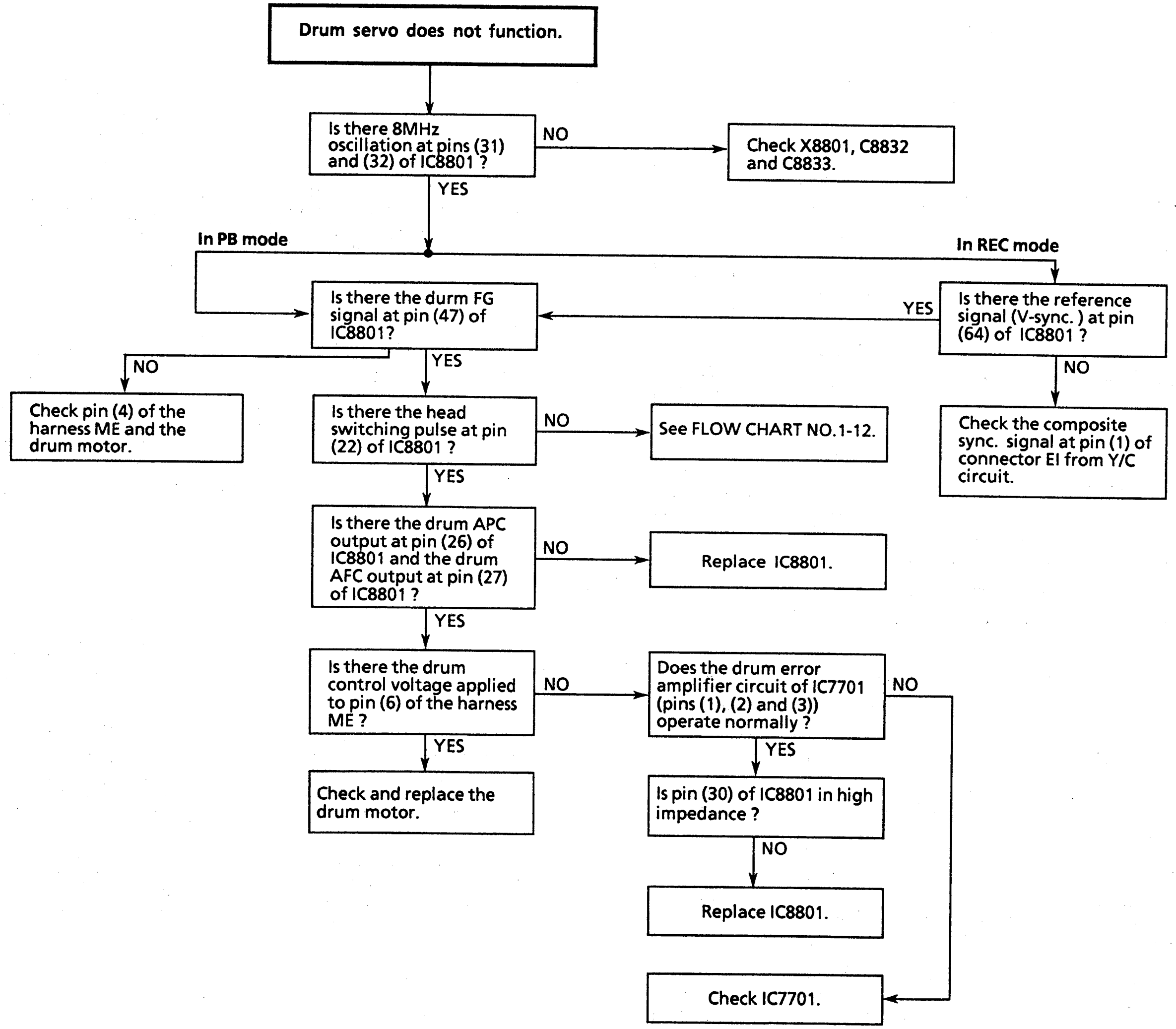
DRUM MOTOR TROUBLESHOOTING

FLOW CHART NO. 1-10


The drum motor fails to run.
Is " H " pulse at of pin (1) of IC7701 (BA15218F) ?
NO
Check IC7701.
YES
Is " H " voltage at pin (6) of ME socket ?
NO
Check between the MC socket and IC7701, and between the MC socket and IC8801.
YES
Is UR12V at pin (3) of ME socket ?
NO
Check the UR12V line.
YES
Replace the drum motor.
The drum motor runs only for a few seconds.
Is drum PG signal at pin (1) of ME socket ?
NO
Check the drum motor.
YES
Is drum PG signal at pin (48) of IC8801?
NO
Check between the ME socket and pin (48) of IC8801.
YES
IS H. SW. pulse at pin (22) of IC8801?
NO
Check IC8801.
YES
Check pin (30) of IC8801.

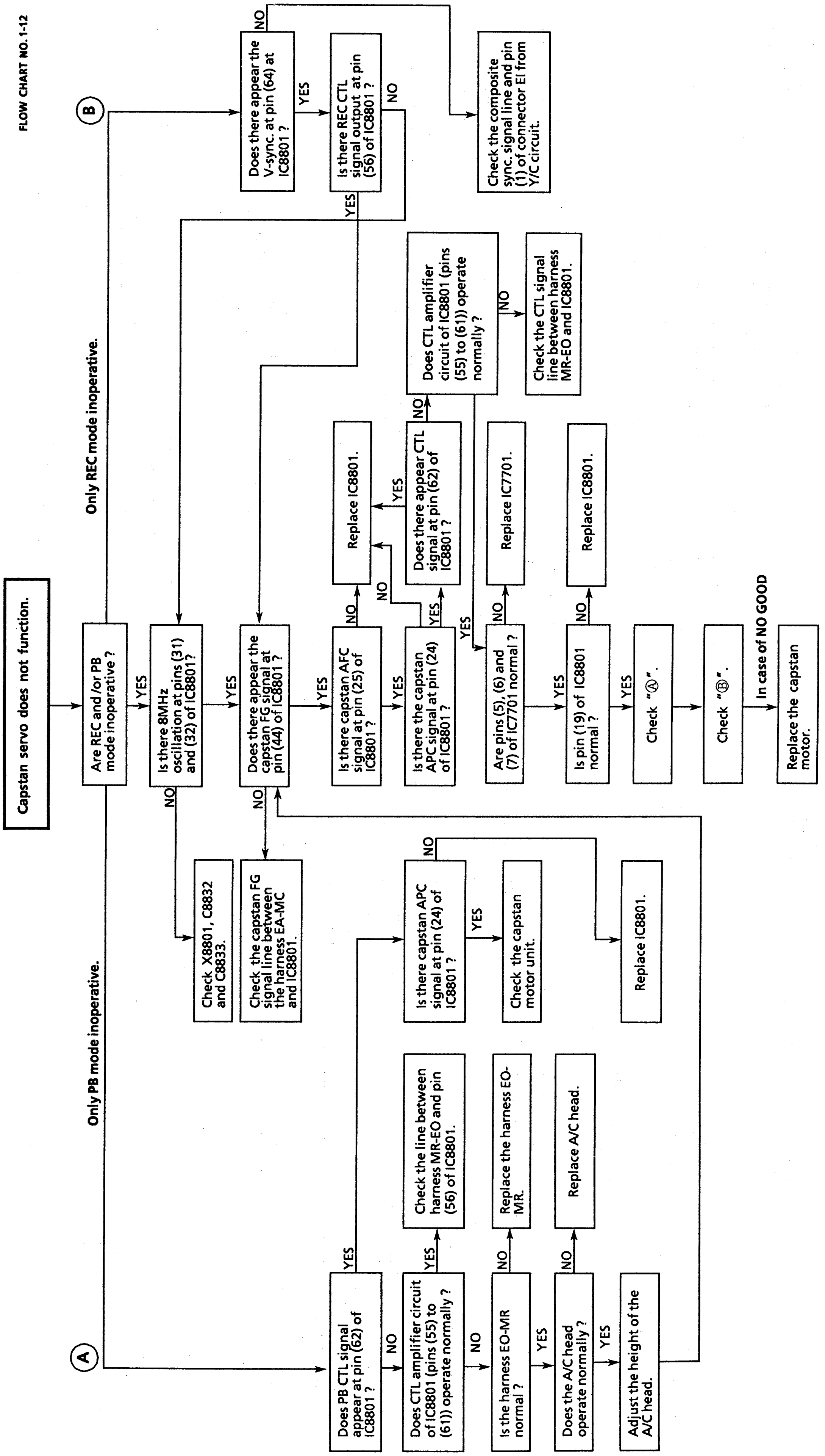
FLOW CHART NO. 1-11

DRUM SERVO TROUBLESHOOTING


Drum servo does not function.
Is there 8MHz oscillation at pins (31) and (32) of IC8801 ?
NO
Check X8801, C8832 and C8833.
YES
In PB mode
In REC mode
Is there the reference signal (V-sync.) at pin (64) of IC8801 ?
YES
NO
Check the composite sync. signal at pin (1) of connector EI from Y/C circuit.
Is there the durm FG signal at pin (47) of IC8801?
NO
Check pin (4) of the harness ME and the drum motor.
YES
Is there the head switching pulse at pin (22) of IC8801 ?
NO
See FLOW CHART NO.1-12.
YES
Is there the drum APC output at pin (26) of IC8801 and the drum AFC output at pin (27) of IC8801 ?
NO
Replace IC8801.
YES
Is there the drum control voltage applied to pin (6) of the harness ME ?
NO
Does the drum error amplifier circuit of IC7701 (pins (1), (2) and (3)) operate normally ?
NO
YES
Is pin (30) of IC8801 in high impedance ?
NO
Replace IC8801.
Check IC7701.
YES
Check and replace the drum motor.

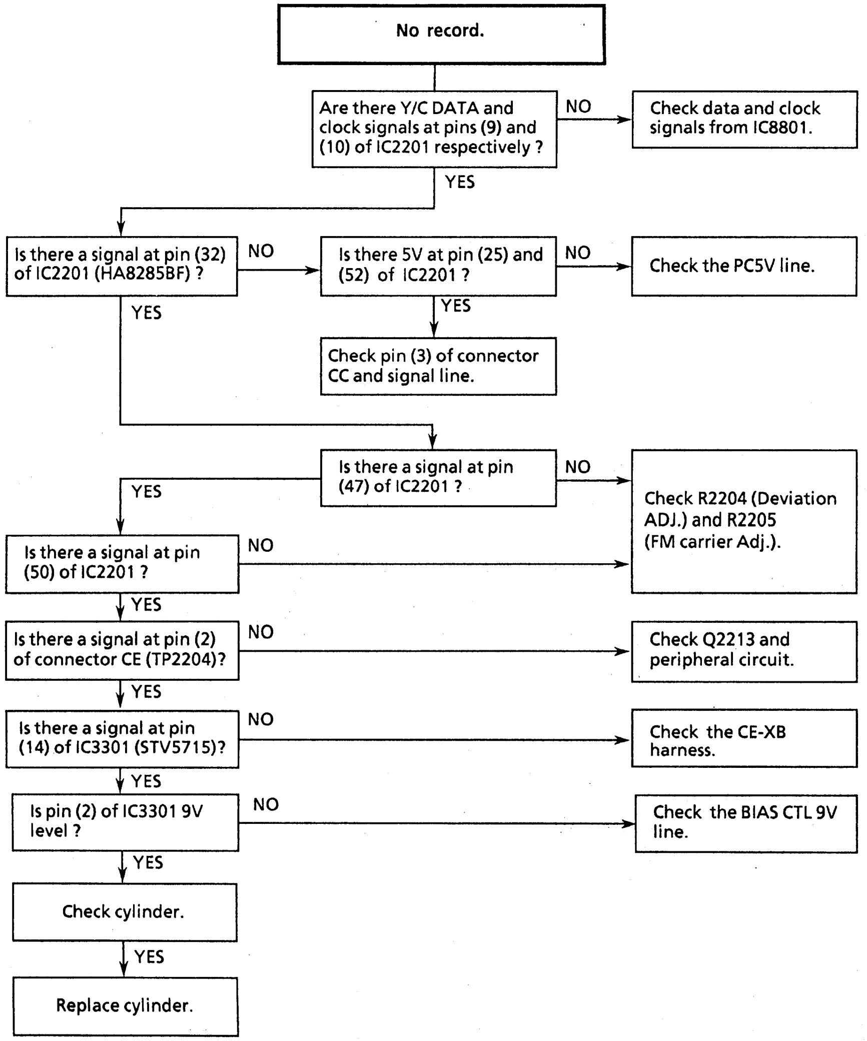
FLOW CHART NO.1-12

CAPSTAN SERVO TROUBLESHOOTING


Capstan servo does not function.
Are REC and /or PB mode inoperative ?
YES
Only REC mode inoperative.
Only PB mode inoperative.
Is there 8MHz oscillation at pins (31) and (32) of IC8801?
NO
Check X8801, C8832 and C8833.
YES
Does there appear the capstan FG signal at pin (44) of IC8801 ?
NO
Check the capstan FG signal line between the harness EA-MC and IC8801.
YES
Is there capstan AFC signal at pin (25) of IC8801 ?
NO
Replace IC8801.
YES
Is there the capstan APC signal at pin (24) of IC8801 ?
NO
YES
Does there appear CTL signal at pin (62) of IC8801 ?
YES
Replace IC8801.
NO
Does CTL amplifier circuit of IC8801 (pins (55) to (61)) operate normally ?
NO
Check the CTL signal line between harness MR-EO and IC8801.
YES
Are pins (5), (6) and (7) of IC7701 normal ?
NO
Replace IC7701.
YES
Is pin (19) of IC8801 normal ?
NO
Replace IC8801.
YES
Check "Ⓐ".
Check "Ⓑ".
In case of NO GOOD
Replace the capstan motor.
Ⓑ
Does there appear the V-sync. at pin (64) at IC8801 ?
NO
Check the composite sync. signal line and pin (1) of connector EI from Y/C circuit.
YES
Is there REC CTL signal output at pin (56) of IC8801 ?
YES
NO
Ⓐ
Does PB CTL signal appear at pin (62) of IC8801 ?
YES
Is there capstan APC signal at pin (24) of IC8801 ?
YES
Check the capstan motor unit.
NO
Replace IC8801.
NO
Does CTL amplifier circuit of IC8801 (pins (55) to (61)) operate normally ?
YES
Check the line between harness MR-EO and pin (56) of IC8801.
NO
Is the harness EO-MR normal ?
NO
Replace the harness EO-MR.
YES
Does the A/C head operate normally ?
NO
Replace A/C head.
YES
Adjust the height of the A/C head.

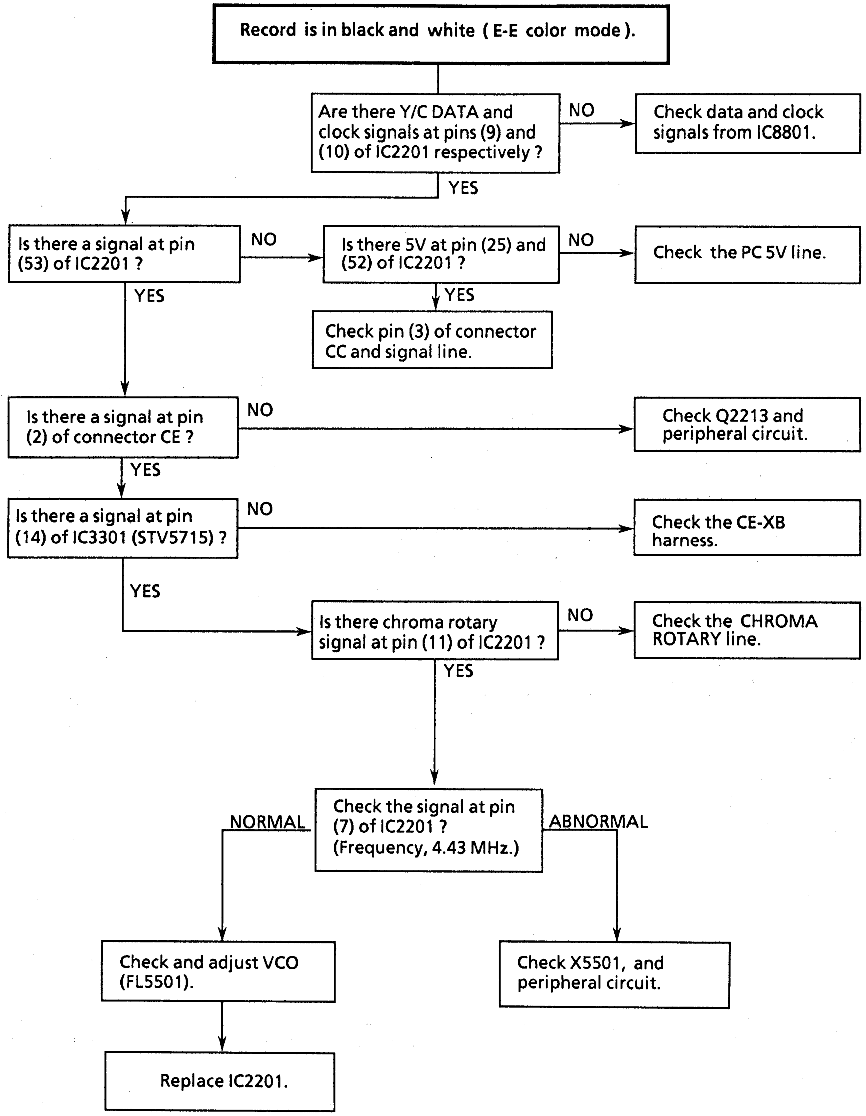
VCR RECORDING MODE (LUMINANCE)TROUBLESHOOTING

FLOW CHART NO. 1-13


No record.
Are there Y/C DATA and clock signals at pins (9) and (10) of IC2201 respectively ?
NO
Check data and clock signals from IC8801.
YES
Is there a signal at pin (32) of IC2201 (HA8285BF) ?
NO
Is there 5V at pin (25) and (52) of IC2201 ?
NO
Check the PC5V line.
YES
Check pin (3) of connector CC and signal line.
YES
Is there a signal at pin (47) of IC2201 ?
NO
Check R2204 (Deviation ADJ.) and R2205 (FM carrier Adj.).
YES
Is there a signal at pin (50) of IC2201 ?
NO
YES
Is there a signal at pin (2) of connector CE (TP2204)?
NO
Check Q2213 and peripheral circuit.
YES
Is there a signal at pin (14) of IC3301 (STV5715)?
NO
Check the CE-XB harness.
YES
Is pin (2) of IC3301 9V level ?
NO
Check the BIAS CTL 9V line.
YES
Check cylinder.
YES
Replace cylinder.

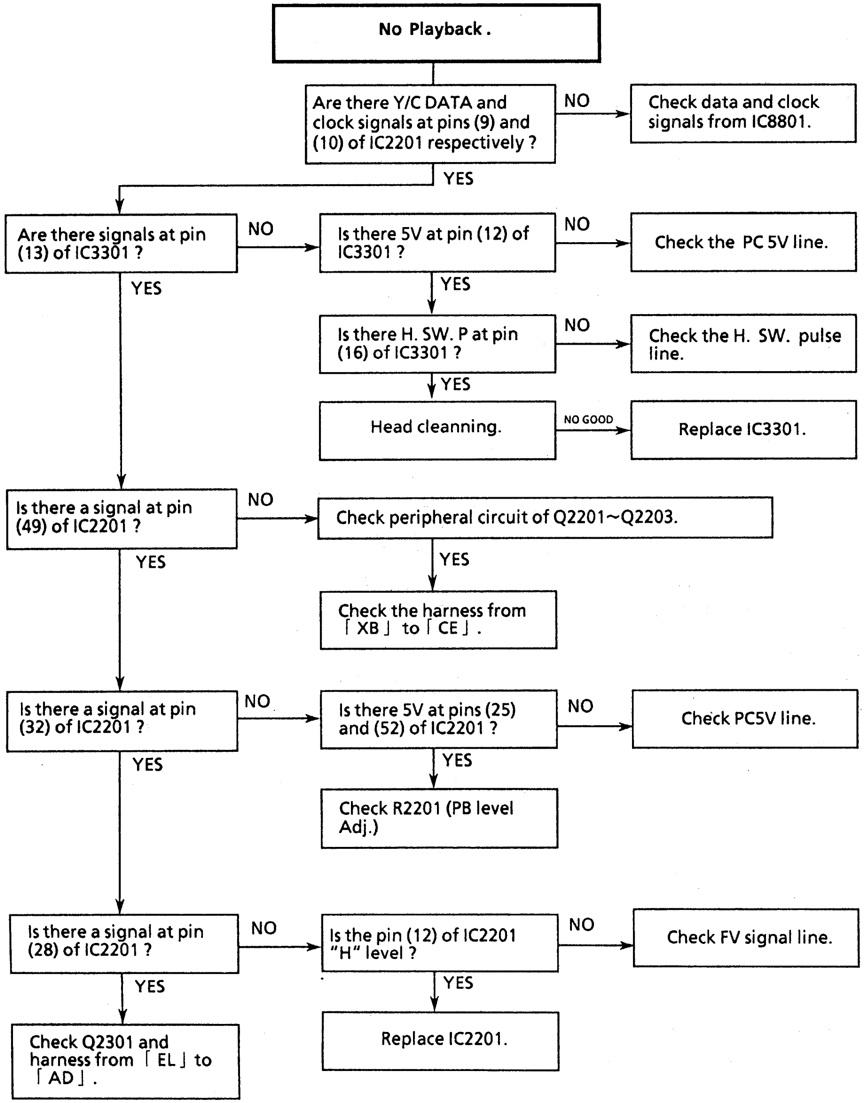
VCR RECORDING MODE (CHROMA) TROUBLESHOOTING

FLOW CHART NO. 1-14


Record is in black and white (E-E color mode).
Are there Y/C DATA and clock signals at pins (9) and (10) of IC2201 respectively ?
NO
Check data and clock signals from IC8801.
YES
Is there a signal at pin (53) of IC2201 ?
NO
Is there 5V at pin (25) and (52) of IC2201 ?
NO
Check the PC 5V line.
YES
Check pin (3) of connector CC and signal line.
YES
Is there a signal at pin (2) of connector CE ?
NO
Check Q2213 and peripheral circuit.
YES
Is there a signal at pin (14) of IC3301 (STV5715) ?
NO
Check the CE-XB harness.
YES
Is there chroma rotary signal at pin (11) of IC2201 ?
NO
Check the CHROMA ROTARY line.
YES
Check the signal at pin (7) of IC2201 ? (Frequency, 4.43 MHz.)
NORMAL
Check and adjust VCO (FL5501).
Replace IC2201.
ABNORMAL
Check X5501, and peripheral circuit.

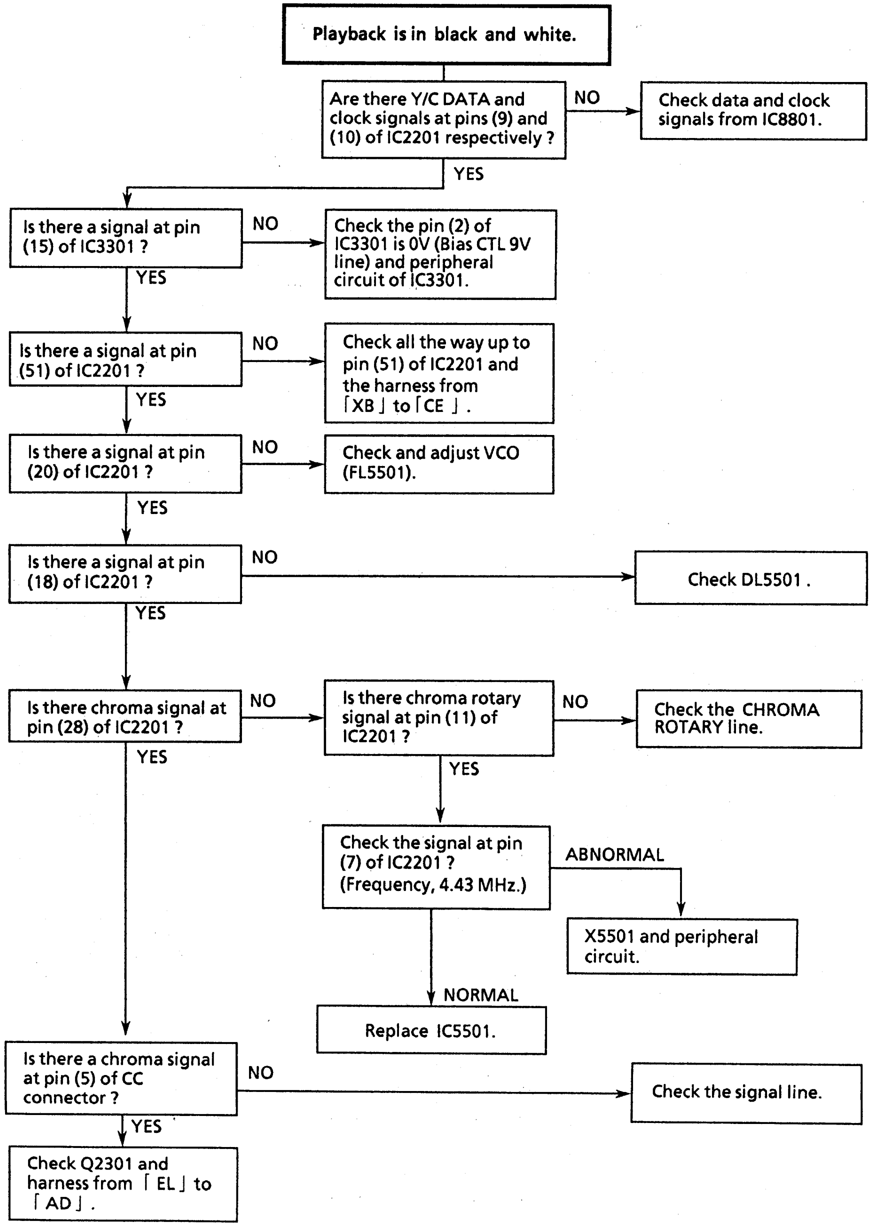
VCR PLAYBACK MODE (LUMINANCE) TROUBLESHOOTING

FLOW CHART NO. 1-15


No Playback .
Are there Y/C DATA and clock signals at pins (9) and (10) of IC2201 respectively ?
NO
Check data and clock signals from IC8801.
YES
Are there signals at pin (13) of IC3301 ?
NO
Is there 5V at pin (12) of IC3301 ?
NO
Check the PC 5V line.
YES
Is there H. SW. P at pin (16) of IC3301 ?
NO
Check the H. SW. pulse line.
YES
Head cleanning.
NO GOOD
Replace IC3301.
YES
Is there a signal at pin (49) of IC2201 ?
NO
Check peripheral circuit of Q2201~Q2203.
YES
Check the harness from 「XB」 to 「CE」.
YES
Is there a signal at pin (32) of IC2201 ?
NO
Is there 5V at pins (25) and (52) of IC2201 ?
NO
Check PC5V line.
YES
Check R2201 (PB level Adj.)
YES
Is there a signal at pin (28) of IC2201 ?
NO
Is the pin (12) of IC2201 "H" level ?
NO
Check FV signal line.
YES
Replace IC2201.
YES
Check Q2301 and harness from 「EL」 to 「AD」.

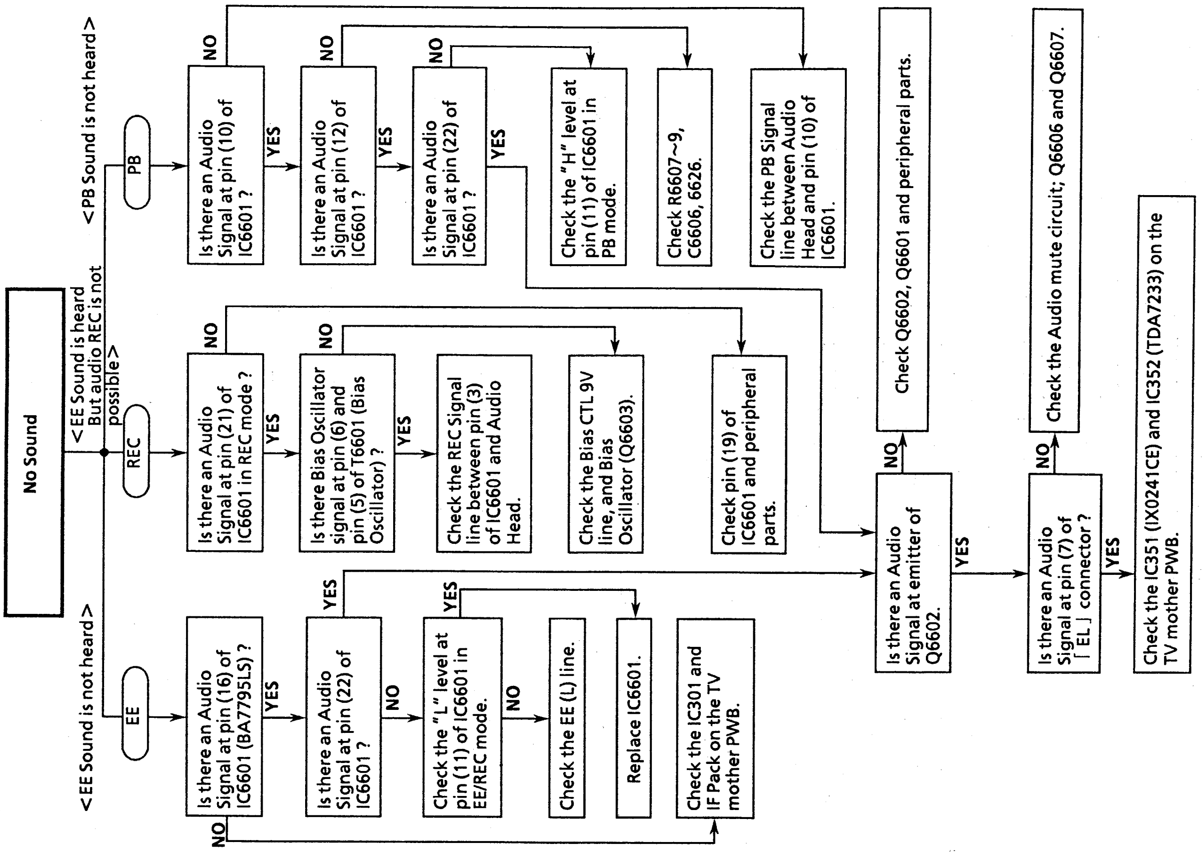
VCR PLAYBACK MODE (CHROMA) TROUBLESHOOTING

FLOW CHART NO. 1-16


Playback is in black and white.
Are there Y/C DATA and clock signals at pins (9) and (10) of IC2201 respectively ?
NO
Check data and clock signals from IC8801.
YES
Is there a signal at pin (15) of IC3301 ?
NO
Check the pin (2) of IC3301 is 0V (Bias CTL 9V line) and peripheral circuit of IC3301.
YES
Is there a signal at pin (51) of IC2201 ?
NO
Check all the way up to pin (51) of IC2201 and the harness from 「XB」 to 「CE」.
YES
Is there a signal at pin (20) of IC2201 ?
NO
Check and adjust VCO (FL5501).
YES
Is there a signal at pin (18) of IC2201 ?
NO
Check DL5501 .
YES
Is there chroma signal at pin (28) of IC2201 ?
NO
Is there chroma rotary signal at pin (11) of IC2201 ?
NO
Check the CHROMA ROTARY line.
YES
Check the signal at pin (7) of IC2201 ? (Frequency, 4.43 MHz.)
ABNORMAL
X5501 and peripheral circuit.
NORMAL
Replace IC5501.
YES
Is there a chroma signal at pin (5) of CC connector ?
NO
Check the signal line.
YES
Check Q2301 and harness from 「EL」 to 「AD」.

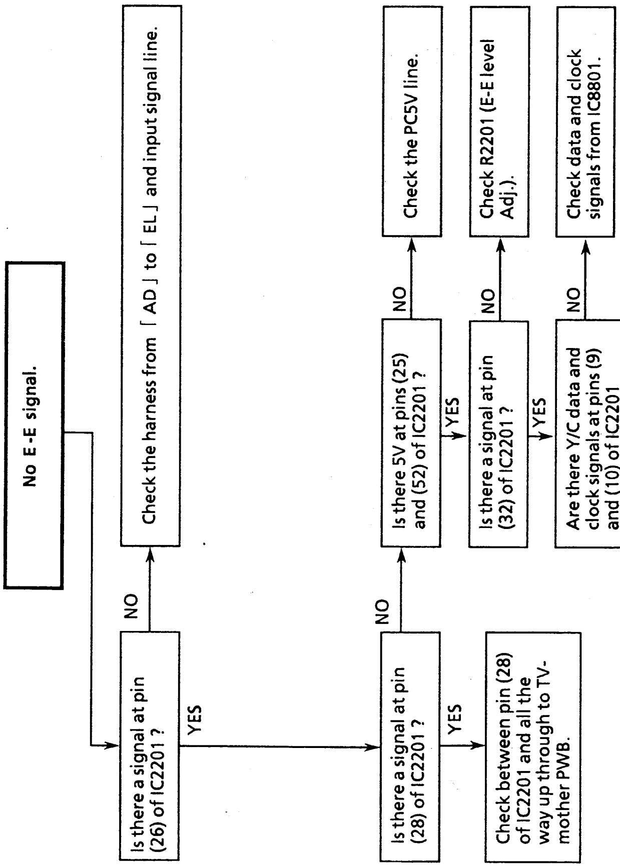
VCR SOUND TROUBLESHOOTING

FLOW CHART NO. 1-18


No Sound
<EE Sound is not heard>
<EE Sound is heard But audio REC is not possible>
<PB Sound is not heard>
EE
REC
PB
Is there an Audio Signal at pin (16) of IC6601 (BA7795LS) ?
Is there an Audio Signal at pin (22) of IC6601 ?
Check the "L" level at pin (11) of IC6601 in EE/REC mode.
Check the EE (L) line.
Replace IC6601.
Check the IC301 and IF Pack on the TV mother PWB.
Is there an Audio Signal at pin (21) of IC6601 in REC mode ?
Is there a Bias Oscillator signal at pin (6) and pin (5) of T6601 (Bias Oscillator) ?
Check the REC Signal line between pin (3) of IC6601 and Audio Head.
Check the Bias CTL 9V line, and Bias Oscillator (Q6603).
Check pin (19) of IC6601 and peripheral parts.
Is there an Audio Signal at pin (10) of IC6601 ?
Is there an Audio Signal at pin (12) of IC6601 ?
Is there an Audio Signal at pin (22) of IC6601 ?
Check the "H" level at pin (11) of IC6601 in PB mode.
Check R6607~9, C6606, 6626.
Check the PB Signal line between Audio Head and pin (10) of IC6601.
Is there an Audio Signal at emitter of Q6602.
Check Q6602, Q6601 and peripheral parts.
Is there an Audio Signal at pin (7) of 「EL」 connector ?
Check the Audio mute circuit; Q6606 and Q6607.
Check the IC351 (IX0241CE) and IC352 (TDA7233) on the TV mother PWB.
YES
NO

VCR E - E MODE TROUBLESHOOTING

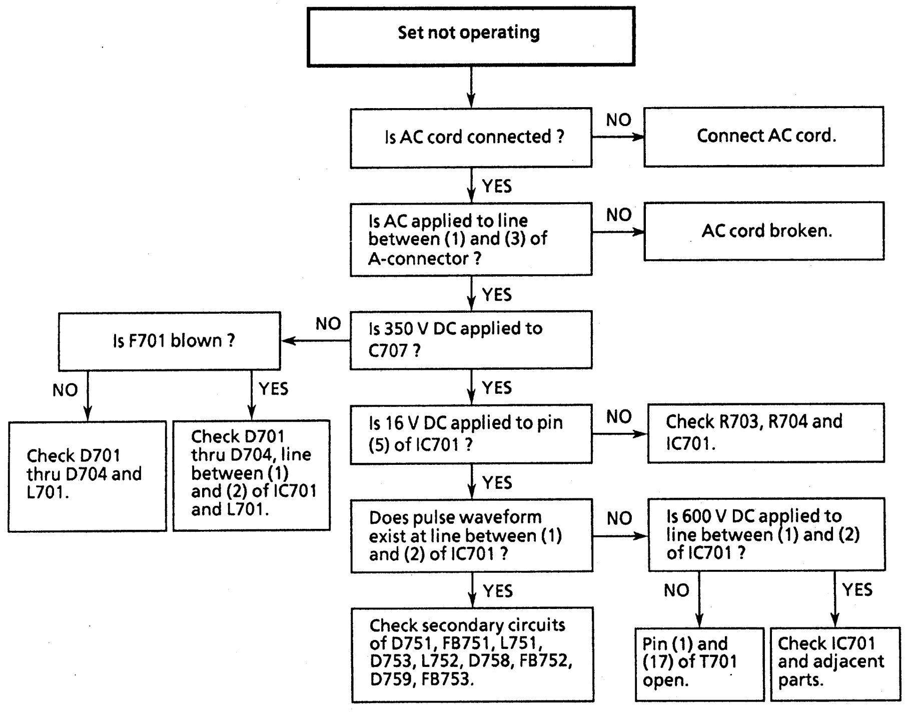
FLOW CHART NO. 1-17


No E-E signal.
Is there a signal at pin (26) of IC2201 ?
Check the harness from 「AD」 to 「EL」 and input signal line.
Is there a signal at pin (28) of IC2201 ?
Check between pin (28) of IC2201 and all the way up through to TV-mother PWB.
Is there 5V at pins (25) and (52) of IC2201 ?
Check the PC5V line.
Is there a signal at pin (32) of IC2201 ?
Check R2201 (E-E level Adj.).
Are there Y/C data and clock signals at pins (9) and (10) of IC2201 respectively ?
Check data and clock signals from IC8801.
Replace IC2201.
YES
NO

TROUBLESHOOTING OF TV SECTION

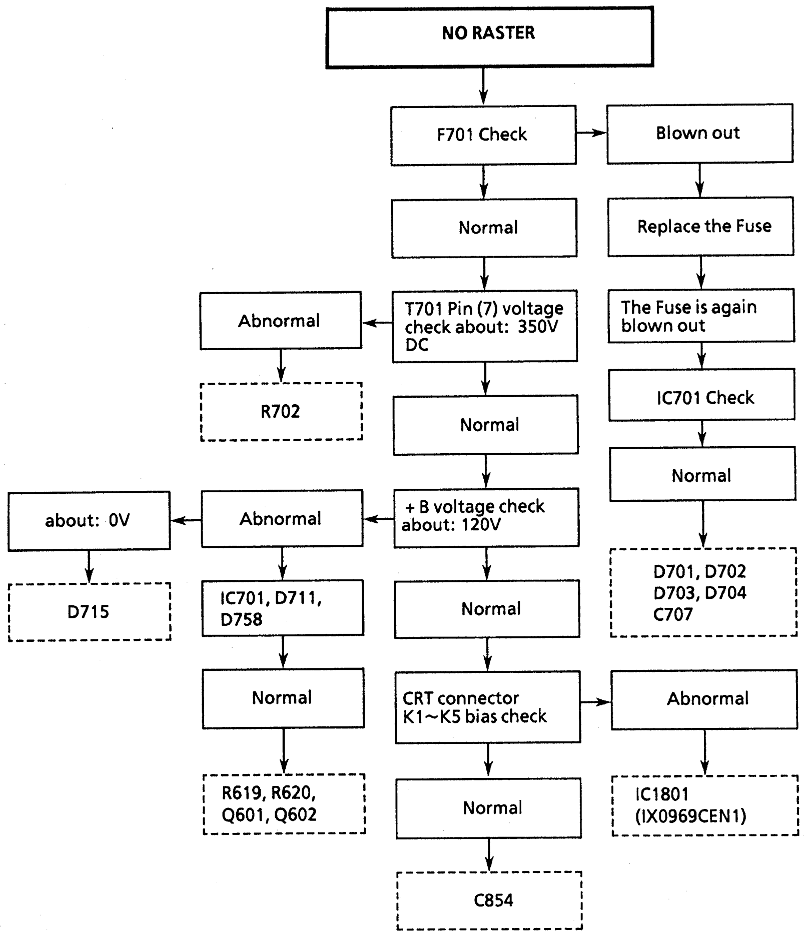
TV TROUBLESHOOTING TABLE

FLOW CHART NO. 2-1


Set not operating
Is AC cord connected ?
NO
Connect AC cord.
YES
Is AC applied to line between (1) and (3) of A-connector ?
NO
AC cord broken.
YES
Is 350 V DC applied to C707 ?
NO
Is F701 blown ?
NO
Check D701 thru D704 and L701.
YES
Check D701 thru D704, line between (1) and (2) of IC701 and L701.
YES
Is 16 V DC applied to pin (5) of IC701 ?
NO
Check R703, R704 and IC701.
YES
Does pulse waveform exist at line between (1) and (2) of IC701 ?
NO
Is 600 V DC applied to line between (1) and (2) of IC701 ?
NO
Pin (1) and (17) of T701 open.
YES
Check IC701 and adjacent parts.
YES
Check secondary circuits of D751, FB751, L751, D753, L752, D758, FB752, D759, FB753.

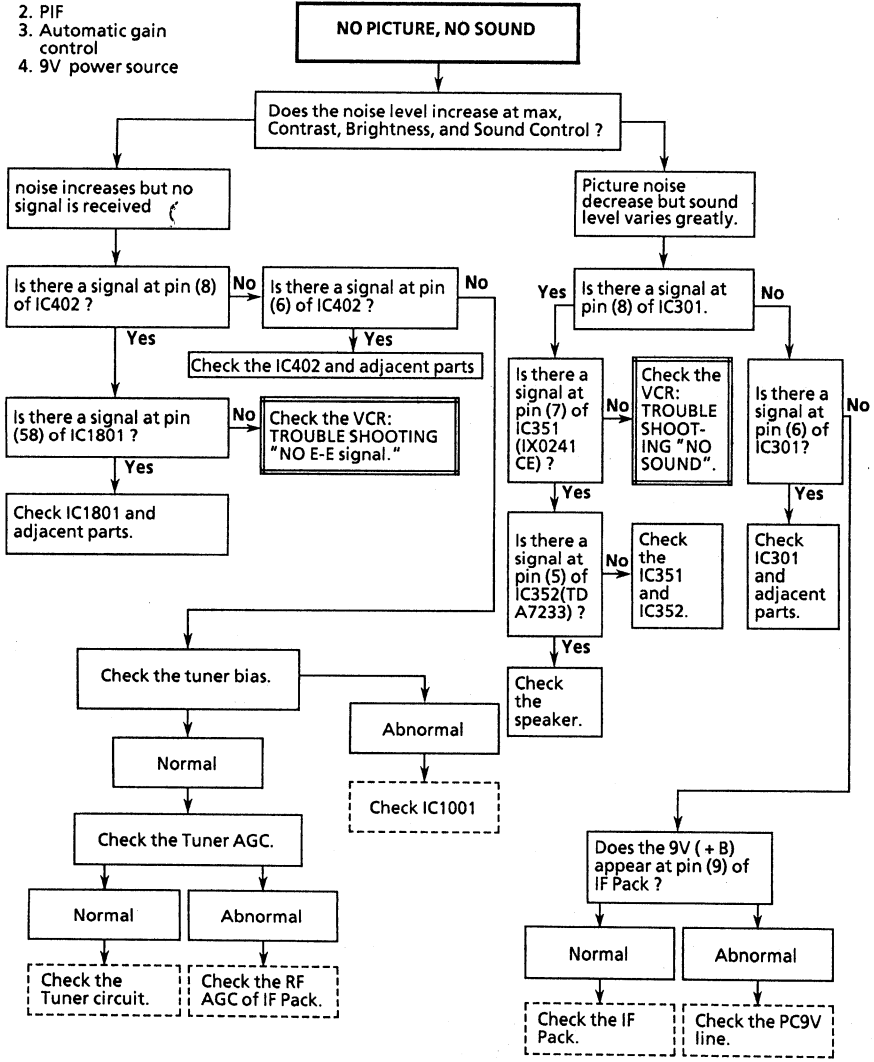
TV TROUBLESHOOTING TABLE

FLOW CHART NO. 2-2

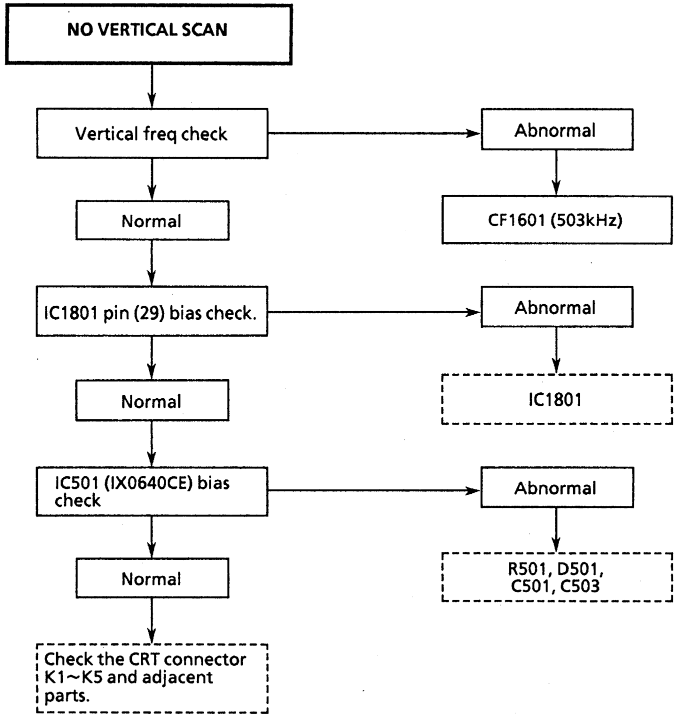

NO RASTER
F701 Check
Blown out
Replace the Fuse
The Fuse is again blown out
IC701 Check
Normal
D701, D702
D703, D704
C707
Normal
T701 Pin (7) voltage check about: 350V DC
Abnormal
R702
Normal
+ B voltage check about: 120V
Abnormal
about: 0V
D715
IC701, D711, D758
Normal
R619, R620, Q601, Q602
Normal
CRT connector K1~K5 bias check
Abnormal
IC1801 (IX0969CEN1)
Normal
C854

FLOW CHART NO. 2-3

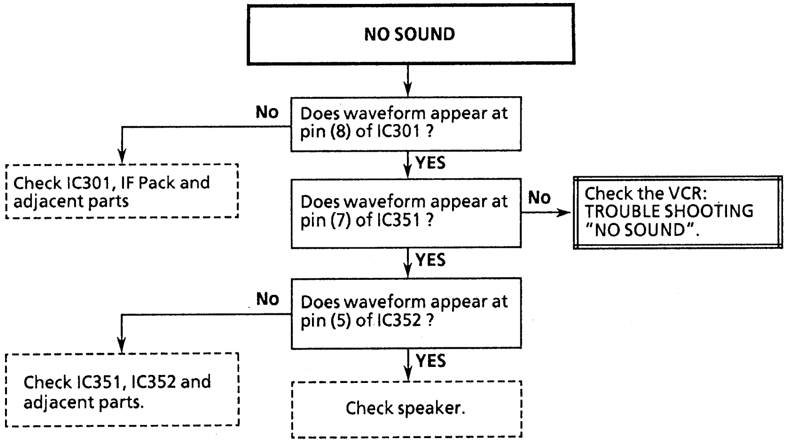
Circuit to be checked:
1. TUNER
2. PIF
3. Automatic gain control
4. 9V power source


NO PICTURE, NO SOUND
Does the noise level increase at max, Contrast, Brightness, and Sound Control ?
noise increases but no signal is received
Picture noise decrease but sound level varies greatly.
Is there a signal at pin (8) of IC402 ?
No
Is there a signal at pin (6) of IC402 ?
No
Yes
Yes
Check the IC402 and adjacent parts
Is there a signal at pin (58) of IC1801 ?
No
Check the VCR: TROUBLE SHOOTING "NO E-E signal."
Yes
Check IC1801 and adjacent parts.
Yes
Is there a signal at pin (8) of IC301.
No
Is there a signal at pin (7) of IC351 (IX0241 CE) ?
No
Check the VCR: TROUBLE SHOOTING "NO SOUND".
Is there a signal at pin (6) of IC301?
No
Yes
Yes
Is there a signal at pin (5) of IC352(TD A7233) ?
No
Check the IC351 and IC352.
Check IC301 and adjacent parts.
Yes
Check the speaker.
Check the tuner bias.
Normal
Abnormal
Check IC1001
Check the Tuner AGC.
Normal
Abnormal
Check the Tuner circuit.
Check the RF AGC of IF Pack.
Does the 9V (+B) appear at pin (9) of IF Pack ?
Normal
Abnormal
Check the IF Pack.
Check the PC9V line.

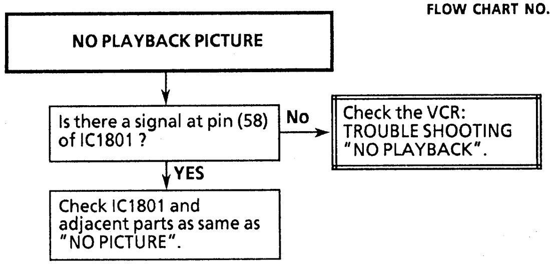
FLOW CHART NO. 2-4


NO VERTICAL SCAN
Vertical freq check
Abnormal
CF1601 (503kHz)
Normal
IC1801 pin (29) bias check.
Abnormal
IC1801
Normal
IC501 (IX0640CE) bias check
Abnormal
R501, D501, C501, C503
Normal
Check the CRT connector K1~K5 and adjacent parts.

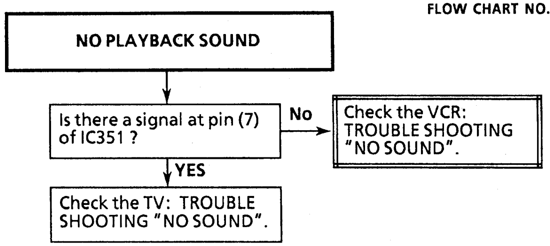
FLOW CHART NO. 2-5


NO SOUND
Does waveform appear at pin (8) of IC301 ?
No
Check IC301, IF Pack and adjacent parts
YES
Does waveform appear at pin (7) of IC351 ?
No
Check the VCR: TROUBLE SHOOTING "NO SOUND".
YES
Does waveform appear at pin (5) of IC352 ?
No
Check IC351, IC352 and adjacent parts.
YES
Check speaker.

FLOW CHART NO. 2-6

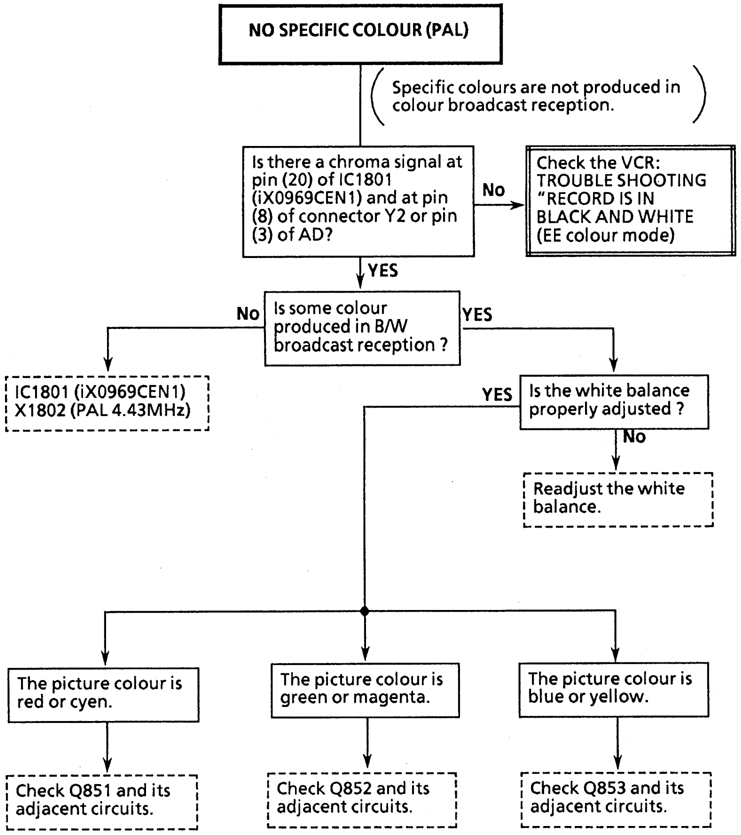

NO PLAYBACK PICTURE
Is there a signal at pin (58) of IC1801 ?
No
Check the VCR: TROUBLE SHOOTING "NO PLAYBACK".
YES
Check IC1801 and adjacent parts as same as "NO PICTURE".

FLOW CHART NO. 2-7


NO PLAYBACK SOUND
Is there a signal at pin (7) of IC351 ?
No
Check the VCR: TROUBLE SHOOTING "NO SOUND".
YES
Check the TV: TROUBLE SHOOTING "NO SOUND".

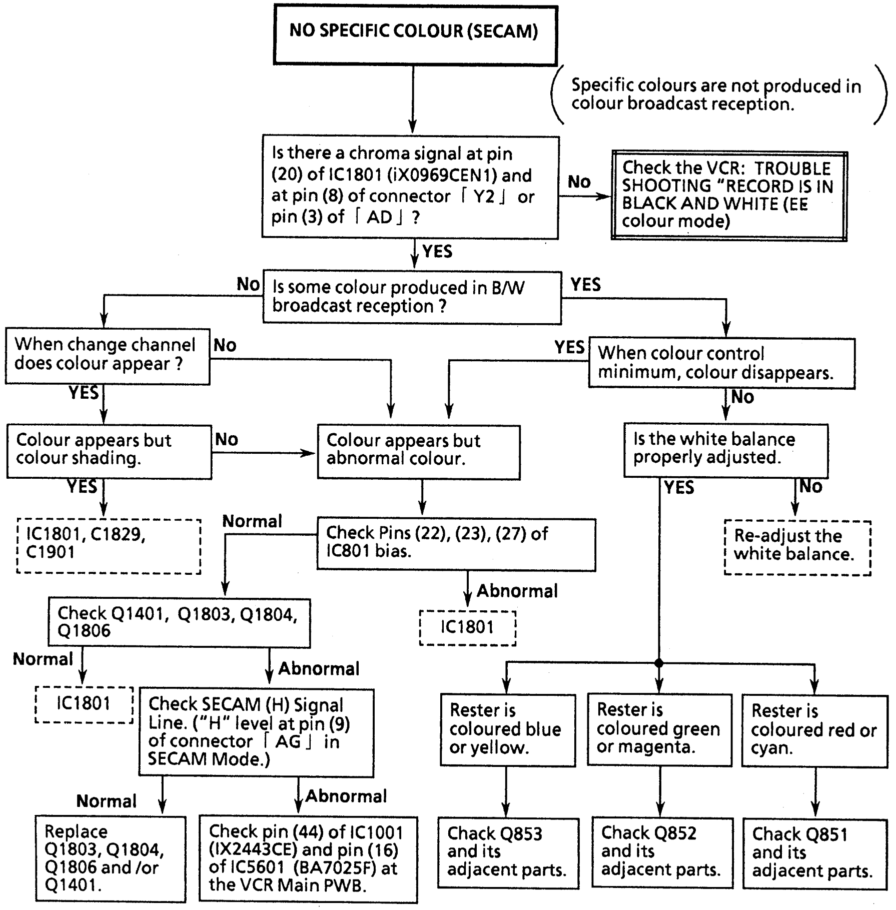
Circuits to be checked:
- IC 1801 and its Adjacent Circuit
- R. G. B. Output Circuit

FLOW CHART NO. 2-8


NO SPECIFIC COLOUR (PAL)
(Specific colours are not produced in colour broadcast reception.)
Is there a chroma signal at pin (20) of IC1801 (iX0969CEN1) and at pin (8) of connector Y2 or pin (3) of AD?
No
Check the VCR: TROUBLE SHOOTING "RECORD IS IN BLACK AND WHITE (EE colour mode)
YES
Is some colour produced in B/W broadcast reception ?
No
IC1801 (iX0969CEN1) X1802 (PAL 4.43MHz)
YES
Is the white balance properly adjusted ?
No
Readjust the white balance.
YES
The picture colour is red or cyen.
Check Q851 and its adjacent circuits.
The picture colour is green or magenta.
Check Q852 and its adjacent circuits.
The picture colour is blue or yellow.
Check Q853 and its adjacent circuits.

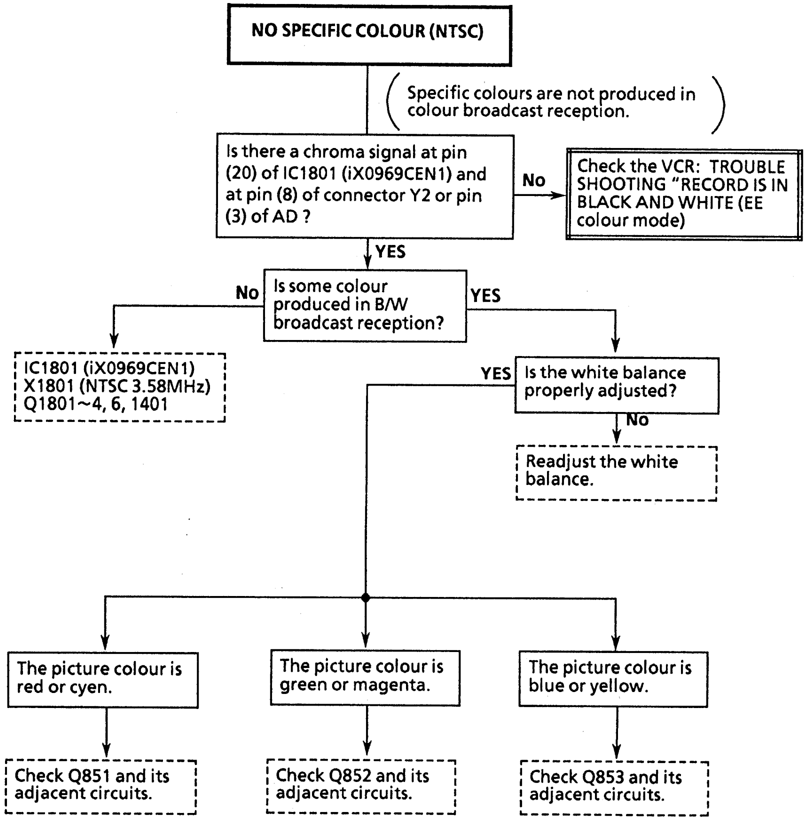
FLOW CHART NO. 2-9

Circuits to be checked:
- IC 1801 and its Adjacent Circuit
- R. G. B. Output Circuit

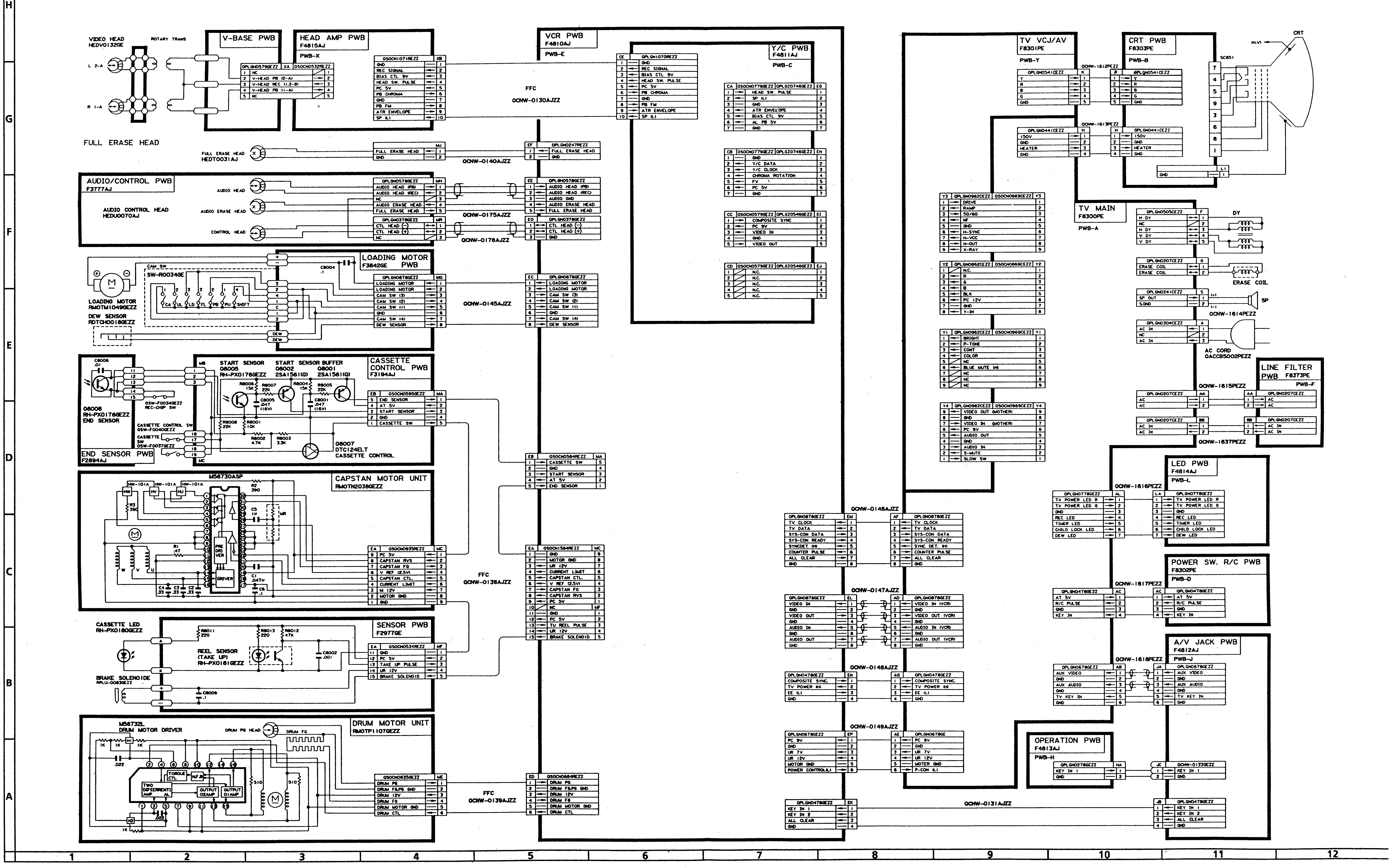

NO SPECIFIC COLOUR (SECAM)
Specific colours are not produced in colour broadcast reception.
Is there a chroma signal at pin (20) of IC1801 (iX0969CEN1) and at pin (8) of connector 「Y2」 or pin (3) of 「AD」?
No
Check the VCR: TROUBLE SHOOTING "RECORD IS IN BLACK AND WHITE (EE colour mode)
YES
Is some colour produced in B/W broadcast reception ?
No
YES
When change channel does colour appear ?
No
YES
When colour control minimum, colour disappears.
YES
No
Colour appears but colour shading.
No
YES
Colour appears but abnormal colour.
Is the white balance properly adjusted.
YES
No
IC1801, C1829, C1901
Normal
Check Pins (22), (23), (27) of IC801 bias.
Abnormal
IC1801
Re-adjust the white balance.
Check Q1401, Q1803, Q1804, Q1806
Normal
Abnormal
IC1801
Check SECAM (H) Signal Line. ("H" level at pin (9) of connector 「AG」 in SECAM Mode.)
Normal
Abnormal
Replace Q1803, Q1804, Q1806 and /or Q1401.
Check pin (44) of IC1001 (IX2443CE) and pin (16) of IC5601 (BA7025F) at the VCR Main PWB.
Rester is coloured blue or yellow.
Rester is coloured green or magenta.
Rester is coloured red or cyan.
Chack Q853 and its adjacent parts.
Chack Q852 and its adjacent parts.
Chack Q851 and its adjacent parts.

FLOW CHART NO. 2-10

Circuits to be checked:
- IC 1801 and its Adjacent Circuit
- R. G. B. Output Circuit


NO SPECIFIC COLOUR (NTSC)
Specific colours are not produced in colour broadcast reception.
Is there a chroma signal at pin (20) of IC1801 (iX0969CEN1) and at pin (8) of connector Y2 or pin (3) of AD ?
No
Check the VCR: TROUBLE SHOOTING "RECORD IS IN BLACK AND WHITE (EE colour mode)
YES
Is some colour produced in B/W broadcast reception?
No
YES
IC1801 (iX0969CEN1) X1801 (NTSC 3.58MHz) Q1801~4, 6, 1401
Is the white balance properly adjusted?
YES
No
Readjust the white balance.
The picture colour is red or cyen.
The picture colour is green or magenta.
The picture colour is blue or yellow.
Check Q851 and its adjacent circuits.
Check Q852 and its adjacent circuits.
Check Q853 and its adjacent circuits.

MODEL VT-3700S OVERALL SCHEMATIC DIAGRAM/
MODELL VT-3700S GESAMT-SCHEMADIAGRAMM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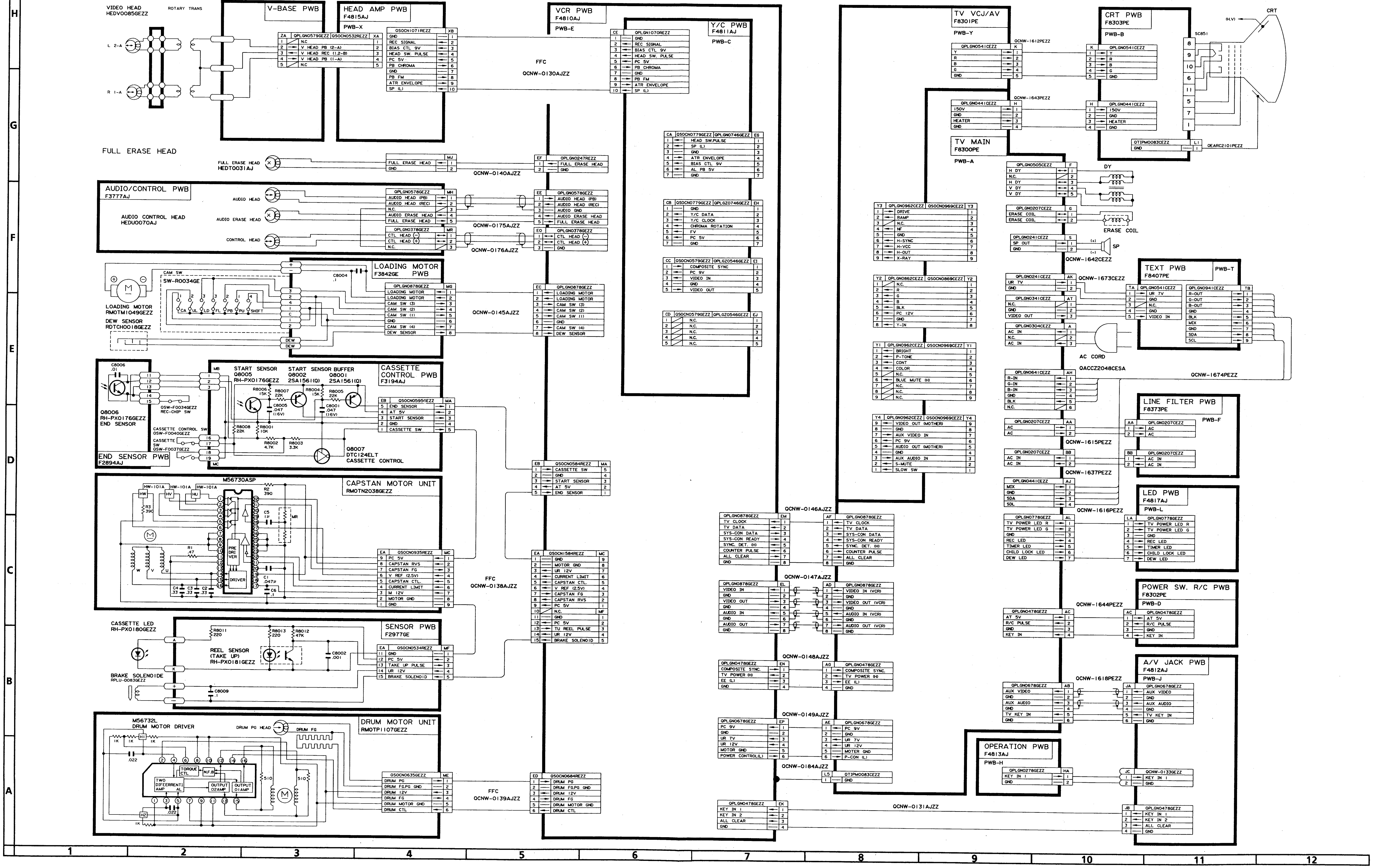
VIDEO HEAD
HEDV0132GE
ROTARY TRANS
V-BASE PWB
HEAD AMP PWB
F4815AJ
PWB-X
FULL ERASE HEAD
HEDT0031AJ
AUDIO/CONTROL PWB
F3777AJ
AUDIO HEAD
AUDIO CONTROL HEAD
HEDU0070AJ
AUDIO ERASE HEAD
CONTROL HEAD
LOADING MOTOR
F3842GE
PWB
LOADING MOTOR
RMOTM1049GEZZ
DEW SENSOR
RDTCH0018GEZZ
SW-R00340E
CASSETTE CONTROL PWB
F3194AJ
START SENSOR
START SENSOR BUFFER
END SENSOR PWB
F2894AJ
08008
RH-PX0176GEZZ
END SENSOR
08007
DTC124ELT
CASSETTE CONTROL
CAPSTAN MOTOR UNIT
RMOTN2038GEZZ
M56730ASP
SENSOR PWB
F2977GE
CASSETTE LED
RH-PX0180GEZZ
REEL SENSOR
(TAKE UP)
RH-PX0181GEZZ
BRAKE SOLENOIDE
RPLU-0083GEZZ
DRUM MOTOR UNIT
RMOTP1107GEZZ
M56732L
DRUM MOTOR DRIVER
DRUM PG HEAD
DRUM FG
VCR PWB
F4810AJ
PWB-E
FFC
QCNW-0130AJZZ
QCNW-0140AJZZ
QCNW-0175AJZZ
QCNW-0176AJZZ
QCNW-0145AJZZ
FFC
QCNW-0138AJZZ
FFC
QCNW-0139AJZZ
Y/C PWB
F4811AJ
PWB-C
TV VCJ/AV
F8301PE
PWB-Y
CRT PWB
F8303PE
PWB-B
CRT
QCNW-1612PEZZ
QCNW-1613PEZZ
TV MAIN
F8300PE
PWB-A
DY
ERASE COIL
SP
QCNW-1614PEZZ
AC CORD
QACCB5002PEZZ
LINE FILTER
PWB F8373PE
PWB-F
QCNW-1615PEZZ
QCNW-1637PEZZ
LED PWB
F4814AJ
PWB-L
QCNW-1616PEZZ
POWER SW. R/C PWB
F8302PE
PWB-D
QCNW-1617PEZZ
A/V JACK PWB
F4812AJ
PWB-J
QCNW-1618PEZZ
OPERATION PWB
F4813AJ
PWB-H
QCNW-0146AJZZ
QCNW-0147AJZZ
QCNW-0148AJZZ
QCNW-0149AJZZ
QCNW-0131AJZZ

MODEL VT-5400S OVERALL SCHEMATIC DIAGRAM/ MODELL VT-5400S GESAMT-SCHEMADIAGRAMM


VIDEO HEAD HEDV0085GEZZ
ROTARY TRANS
V-BASE PWB
HEAD AMP PWB F4815AJ PWB-X
VCR PWB F4810AJ PWB-E
Y/C PWB F4811AJ PWB-C
FFC QCNW-0130AJZZ
FULL ERASE HEAD
FULL ERASE HEAD HEDT0031AJ
QCNW-0140AJZZ
AUDIO/CONTROL PWB F3777AJ
AUDIO HEAD
AUDIO ERASE HEAD
CONTROL HEAD
AUDIO CONTROL HEAD HEDU0070AJ
QCNW-0175AJZZ
QCNW-0176AJZZ
LOADING MOTOR F3842GE PWB
CAM SW SW-R0034GE
LOADING MOTOR RMOTM1049GEZZ
DEW SENSOR RDTCH0018GEZZ
QCNW-0145AJZZ
START SENSOR Q8005 RH-PX0176GEZZ
START SENSOR BUFFER Q8002 Q8001 2SA1561(Q) 2SA1561(Q)
CASSETTE CONTROL PWB F3194AJ
Q8006 RH-PX0176GEZZ END SENSOR
END SENSOR PWB F2894AJ
Q8007 DTC124ELT CASSETTE CONTROL
CAPSTAN MOTOR UNIT RMOTN2038GEZZ
M56730ASP
FFC QCNW-0138AJZZ
CASSETTE LED RH-PX0180GEZZ
SENSOR PWB F2977GE
REEL SENSOR (TAKE UP) RH-PX0181GEZZ
BRAKE SOLENOID RPLU-0083GEZZ
M56732L DRUM MOTOR DRIVER
DRUM MOTOR UNIT RMOTP1107GEZZ
DRUM PG HEAD
FFC QCNW-0139AJZZ
TV VCJ/AV F8301PE PWB-Y
QCNW-1612PEZZ
QCNW-1643PEZZ
CRT PWB F8303PE PWB-B
CRT
SC851
QEARC2101PEZZ
TV MAIN F8300PE PWB-A
DY
ERASE COIL
SP
QCNW-1642CEZZ
TEXT PWB F8407PE PWB-T
QCNW-1673CEZZ
AC CORD QACCZ2048CESA
QCNW-1674PEZZ
LINE FILTER PWB F8373PE PWB-F
QCNW-1615PEZZ
QCNW-1637PEZZ
LED PWB F4817AJ PWB-L
QCNW-1616PEZZ
POWER SW. R/C PWB F8302PE PWB-D
QCNW-1644PEZZ
A/V JACK PWB F4812AJ PWB-J
QCNW-1618PEZZ
OPERATION PWB F4813AJ PWB-H
QCNW-0146AJZZ
QCNW-0147AJZZ
QCNW-0148AJZZ
QCNW-0149AJZZ
QCNW-0184AJZZ
QCNW-0131AJZZ
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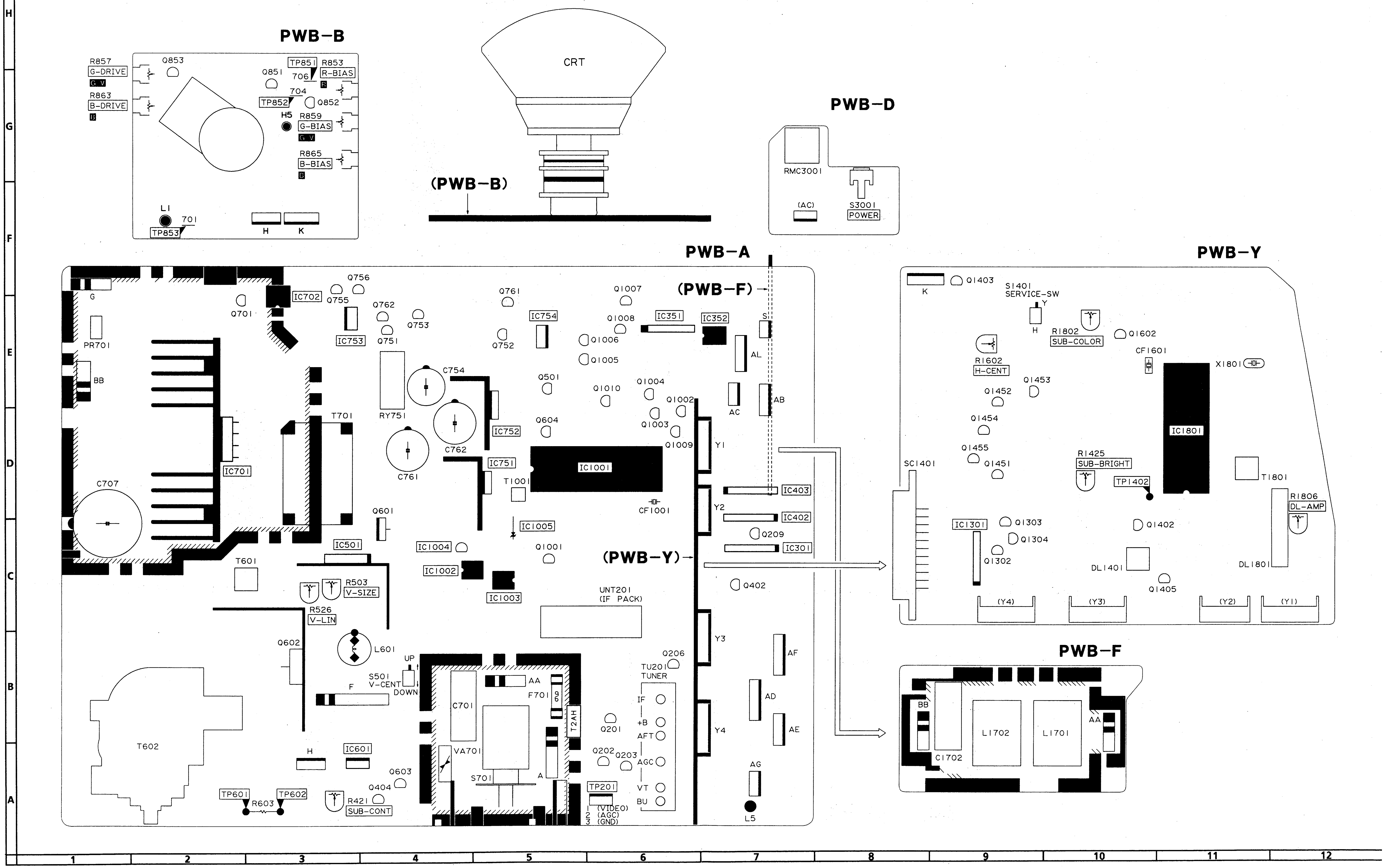
MODEL VT-3700S CHASSIS LAYOUT OF TV SECTION/ MODELL VT-3700S CHASSIS-ANORDNUNG DES TV-TEILS


PWB-B
R857
G-DRIVE
G V
R863
B-DRIVE
B
Q853
Q851
TP851
706
R853
R-BIAS
R
704
TP852
Q852
H5
R859
G-BIAS
G V
R865
B-BIAS
B
L1
701
TP853
H
K
CRT
(PWB-B)
PWB-D
RMC3001
(AC)
S3001
POWER
PWB-A
(PWB-F)
(PWB-Y)
G
PR701
BB
C707
IC701
IC702
Q701
Q756
Q755
IC753
Q762
Q753
Q751
RY751
C754
C761
C762
IC752
IC751
T701
T1001
Q761
Q752
IC754
Q1007
Q1008
Q1006
Q1005
IC351
IC352
S
AL
Q501
Q1010
Q1004
Q1002
Q1003
Q1009
Q604
AC
AB
IC1001
CF1001
IC1005
Q1001
Y1
Y2
IC403
IC402
Q209
IC301
Q601
IC501
T601
IC1004
IC1002
IC1003
R503
V-SIZE
R526
V-LIN
UNT201
(IF PACK)
Q402
Q602
L601
UP
S501
V-CENT
DOWN
F
AA
C701
F701
T2AH
VA701
S701
A
T602
H
IC601
Q603
Q404
TP601
TP602
R603
R421
SUB-CONT
Q201
Q202
Q203
Q206
TU201
TUNER
IF
+B
AFT
AGC
VT
BU
TP201
1 (VIDEO)
2 (AGC)
3 (GND)
Y3
Y4
AF
AD
AE
AG
L5
PWB-Y
K
Q1403
S1401
SERVICE-SW
Y
H
R1802
SUB-COLOR
Q1602
CF1601
X1801
R1602
H-CENT
Q1452
Q1453
Q1454
Q1455
Q1451
IC1801
SC1401
R1425
SUB-BRIGHT
TP1402
T1801
R1806
DL-AMP
IC1301
Q1303
Q1304
Q1302
Q1402
DL1401
DL1801
Q1405
(Y4)
(Y3)
(Y2)
(Y1)
PWB-F
BB
AA
L1702
L1701
C1702
H
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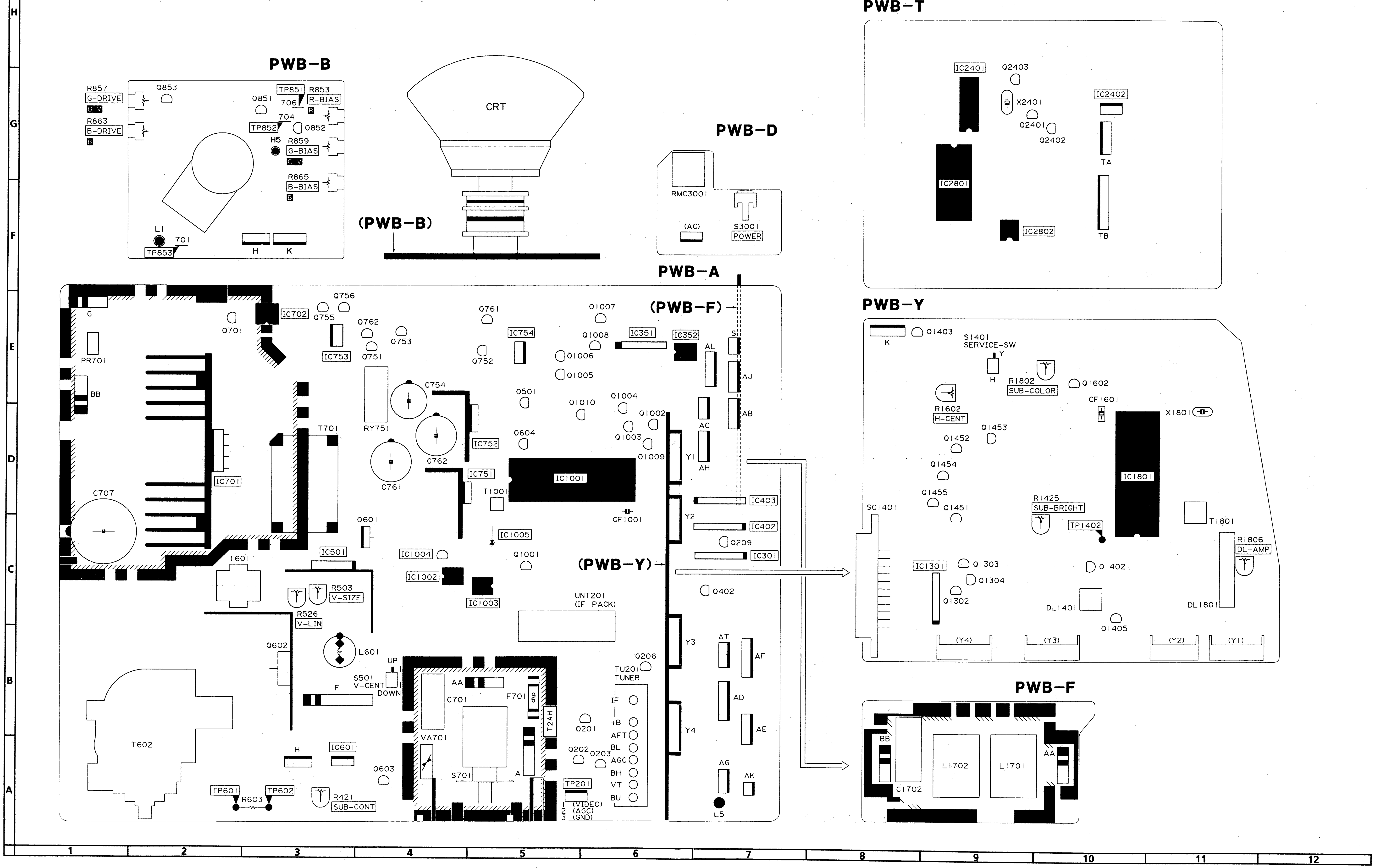
MODEL VT-5400S CHASSIS LAYOUT OF TV SECTION/
MODELL VT-5400S CHASSIS-ANORDNUNG DES TV-TEILS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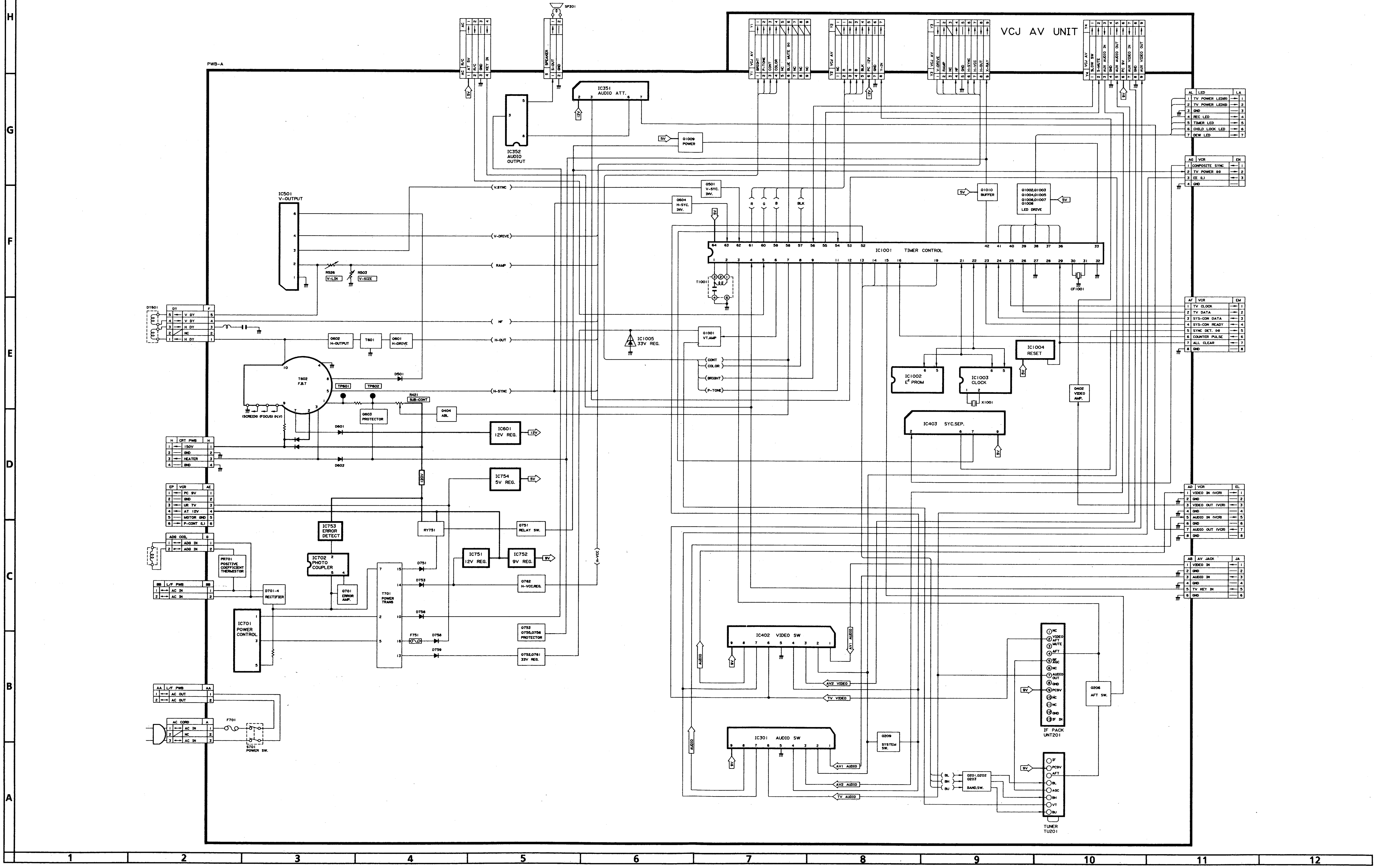
12
PWB−B
R857
G-DRIVE
G V
R863
B-DRIVE
B
Q853
Q851
TP851
706
R853
R-BIAS
R
704
TP852
Q852
H5
R859
G-BIAS
G V
R865
B-BIAS
B
L1
701
TP853
H
K
CRT
(PWB−B)
PWB−D
RMC3001
(AC)
S3001
POWER
PWB−A
(PWB−F)
G
IC702
Q756
Q755
Q701
PR701
IC753
Q762
Q753
Q751
Q761
IC754
Q752
Q1007
Q1008
IC351
IC352
Q1006
Q1005
S
AL
AJ
AB
AC
AH
BB
RY751
C754
Q501
Q1010
Q1004
Q1002
Q1003
Q1009
T701
C762
IC752
Q604
C761
IC701
IC751
IC1001
T1001
Y1
C707
Q601
CF1001
IC1005
Y2
IC403
IC402
Q209
T601
IC501
IC1004
Q1001
IC301
IC1002
(PWB−Y)
R503
V-SIZE
IC1003
Q402
R526
V-LIN
UNT201
(IF PACK)
Q602
L601
UP
S501
V-CENT
DOWN
F
AA
F701
T2AH
C701
Q206
TU201
TUNER
IF
+B
AFT
BL
AGC
BH
VT
BU
Y3
AT
AF
AD
Q201
Y4
AE
T602
H
IC601
VA701
Q202
Q203
Q603
S701
A
TP201
1 (VIDEO)
2 (AGC)
3 (GND)
AG
AK
L5
TP601
R603
TP602
R421
SUB-CONT
PWB−T
IC2401
Q2403
X2401
IC2402
Q2401
Q2402
TA
IC2801
IC2802
TB
PWB−Y
K
Q1403
S1401
SERVICE-SW
Y
H
R1802
SUB-COLOR
Q1602
R1602
H-CENT
CF1601
X1801
Q1453
Q1452
Q1454
Q1455
Q1451
IC1801
R1425
SUB-BRIGHT
TP1402
SC1401
T1801
R1806
DL-AMP
IC1301
Q1303
Q1304
Q1302
Q1402
DL1401
Q1405
DL1801
(Y4)
(Y3)
(Y2)
(Y1)
PWB−F
BB
L1702
L1701
AA
C1702

MODEL VT-3700S BLOCK DIAGRAM OF TV SECTION/ MODELL VT-3700S BLOCKSCHALTBILD DES TV-TEILS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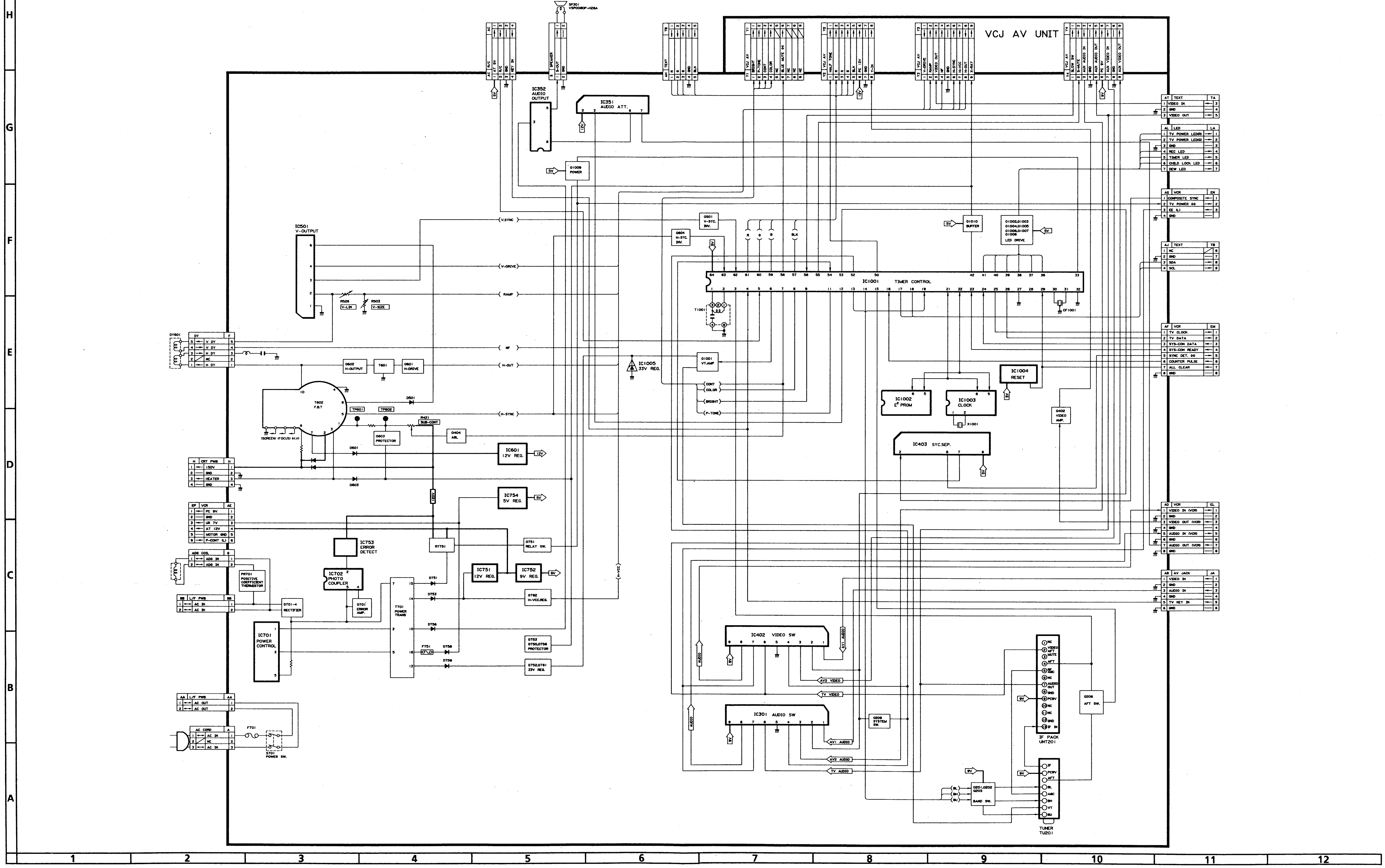
PWB-A
VCJ AV UNIT
SP301
IC351 AUDIO ATT.
IC352 AUDIO OUTPUT
IC501 V-OUTPUT
R526 V-LIN
R503 V-SIZE
DY601
Q602 H-OUTPUT
T601
Q601 H-DRIVE
T602 F.B.T
TP601
TP602
D501
R421 SUB-CONT
Q603 PROTECTOR
Q404 ABL
(SCREEN) (FOCUS) (H.V)
D601
D603
IC601 12V REG.
IC754 5V REG.
IC753 ERROR DETECT
IC702 PHOTO COUPLER
Q701 ERROR AMP.
PR701 POSITIVE COEFFICIENT THERMISTOR
D701-4 RECTIFIER
IC701 POWER CONTROL
T701 POWER TRANS
RY751
Q751 RELAY SW.
IC751 12V REG.
IC752 9V REG.
Q762 H-VCC.REG.
Q753 Q756,Q758 PROTECTOR
Q752,Q761 33V REG.
D751
D753
D756
F751
D758
D759
F701
S701 POWER SW.
V.SYNC
V-DRIVE
RAMP
NF
H-OUT
H-SYNC
H-VCC
Q501 V-SYC. INV.
Q604 H-SYC. INV.
Q1009 POWER
IC1005 33V REG.
Q1001 VT.AMP
CONT
COLOR
BRIGHT
P-TONE
T1001
IC1001 TIMER CONTROL
Q1010 BUFFER
Q1002,Q1003 Q1004,Q1005 Q1006,Q1007 Q1008 LED DRIVE
CF1001
IC1004 RESET
IC1002 E² PROM
IC1003 CLOCK
X1001
Q402 VIDEO AMP.
IC403 SYC.SEP.
IC402 VIDEO SW
IC301 AUDIO SW
Q209 SYSTEM SW.
Q206 AFT SW.
Q201,Q202 Q203 BAND.SW.
AV1 AUDIO
AV2 AUDIO
TV AUDIO
AV1 VIDEO
AV2 VIDEO
TV VIDEO
IF PACK UNT201
TUNER TU201
AL LED LA
1 TV POWER LED(R)
2 TV POWER LED(G)
3 GND
4 REC LED
5 TIMER LED
6 CHILD LOCK LED
7 DEW LED
AG VCR EN
1 COMPOSITE SYNC
2 TV POWER (H)
3 CE (L)
4 GND
AF VCR EM
1 TV CLOCK
2 TV DATA
3 SYS-CON DATA
4 SYS-CON READY
5 SYNC DET. (H)
6 COUNTER PULSE
7 ALL CLEAR
8 GND
AD VCR EL
1 VIDEO IN (VCR)
2 GND
3 VIDEO OUT (VCR)
4 GND
5 AUDIO IN (VCR)
6 GND
7 AUDIO OUT (VCR)
8 GND
AB AV JACK JA
1 VIDEO IN
2 GND
3 AUDIO IN
4 GND
5 TV KEY IN
6 GND
H CRT PWB H
1 150V
2 GND
3 HEATER
4 GND
EP VCR AE
1 PC 9V
2 GND
3 UR TV
4 AT 12V
5 MOTOR GND
6 P-CONT (L)
AA L/F PWB AA
1 AC OUT
2 AC OUT
AC CORD A
1 AC IN
2 NC
3 AC IN
BB L/F PWB BB
1 AC IN
2 AC IN
ADG COIL G
1 ADG IN
2 ADG IN

MODEL VT-5400S BLOCK DIAGRAM OF TV SECTION/
MODELL VT-5400S BLOCKSCHALTBILD DES TV-TEILS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VCJ AV UNIT
SP301
IC352 AUDIO OUTPUT
IC351 AUDIO ATT.
Q1009 POWER
IC501 V-OUTPUT
V.SYNC
V-DRIVE
RAMP
R526 V-LIN
R503 V-SIZE
DY601
Q602 H-OUTPUT
T601
Q601 H-DRIVE
NF
H-OUT
H-SYNC
T602 F.B.T
TP601
TP602
D501
R421 SUB-CONT
Q603 PROTECTOR
Q404 ABL
(SCREEN) (FOCUS) (H.V)
D601
D603
IC601 12V REG.
IC754 5V REG.
IC753 ERROR DETECT
IC702 PHOTO COUPLER
Q701 ERROR AMP.
PR701 POSITIVE COEFFICIENT THERMISTOR
D701-4 RECTIFIER
IC701 POWER CONTROL
T701 POWER TRANS
RY751
Q751 RELAY SW.
IC751 12V REG.
IC752 9V REG.
Q782 H-VCC REG.
Q753 Q750,Q756 PROTECTOR
Q752,Q761 33V REG.
F751
F701
S701 POWER SW.
D751
D753
D756
D758
D759
H-VCC
IC1005 33V REG.
Q1001 VT.AMP
Q501 V-SYC. INV.
Q604 H-SYC. INV.
CONT
COLOR
BRIGHT
P-TONE
R
G
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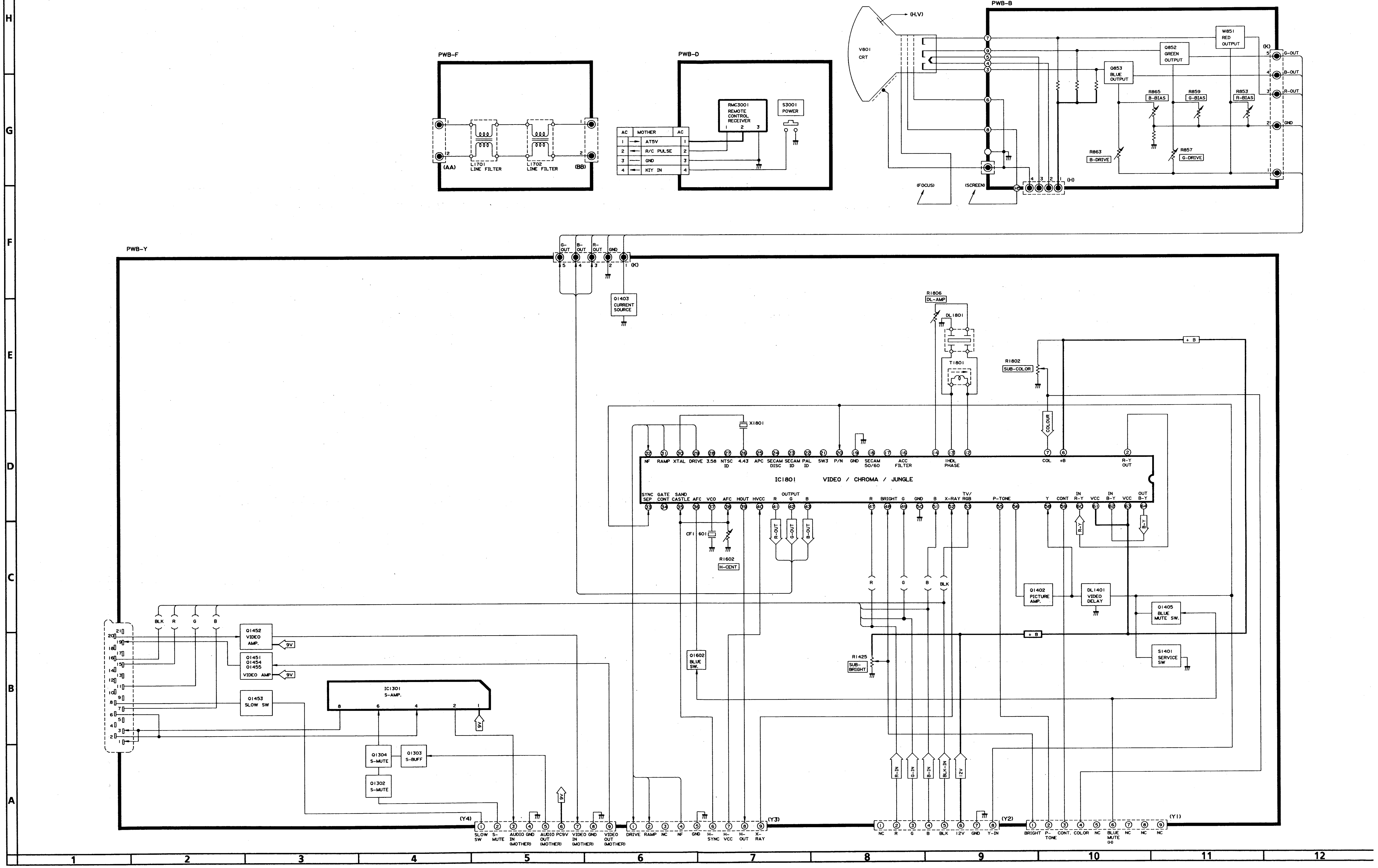
BLK
IC1001 TIMER CONTROL
T1001
CF1001
Q1010 BUFFER
Q1002,Q1003 Q1004,Q1005 Q1006,Q1007 Q1008 LED DRIVE
IC1004 RESET
IC1002 E² PROM
IC1003 CLOCK
X1001
IC403 SYC.SEP.
Q402 VIDEO AMP.
IC402 VIDEO SW
IC301 AUDIO SW
AUDIO
AV1 AUDIO
AV2 VIDEO
TV VIDEO
AV1
AV2 AUDIO
TV AUDIO
Q209 SYSTEM SW.
Q206 AFT SW.
IF PACK UNT201
TUNER TU201
Q201,Q202 Q203 BAND SW.
BL
BH
BU
5V
9V
12V
AT TEXT TA
VIDEO IN
GND
VIDEO OUT
AL LED LA
TV POWER LED(R)
TV POWER LED(G)
REC LED
TIMER LED
CHILD LOCK LED
DEW LED
AG VCR EM
COMPOSITE SYNC
TV POWER 9V
EE (L)
AJ TEXT TB
NC
SDA
SCL
AF VCR EM
TV CLOCK
TV DATA
SYS-CON DATA
SYS-CON READY
SYNC DET. 9V
COUNTER PULSE
ALL CLEAR
AD VCR EL
VIDEO IN (VCR)
VIDEO OUT (VCR)
AUDIO IN (VCR)
AUDIO OUT (VCR)
AR AV JACK JA
AUDIO IN
TV KEY IN
H CRT PWB H
150V
HEATER
EP VCR AE
PC 9V
UR TV
AT 12V
MOTOR GND
P-CONT (L)
ADS COIL
ADS IN
BB L/F PWB BB
AC IN
AA L/F PWB AA
AC OUT
AC CORD A
NC

MODEL VT-3700S BLOCK DIAGRAM OF TV SECTION/ MODELL VT-3700S BLOCKSCHALTBILD DES TV-TEILS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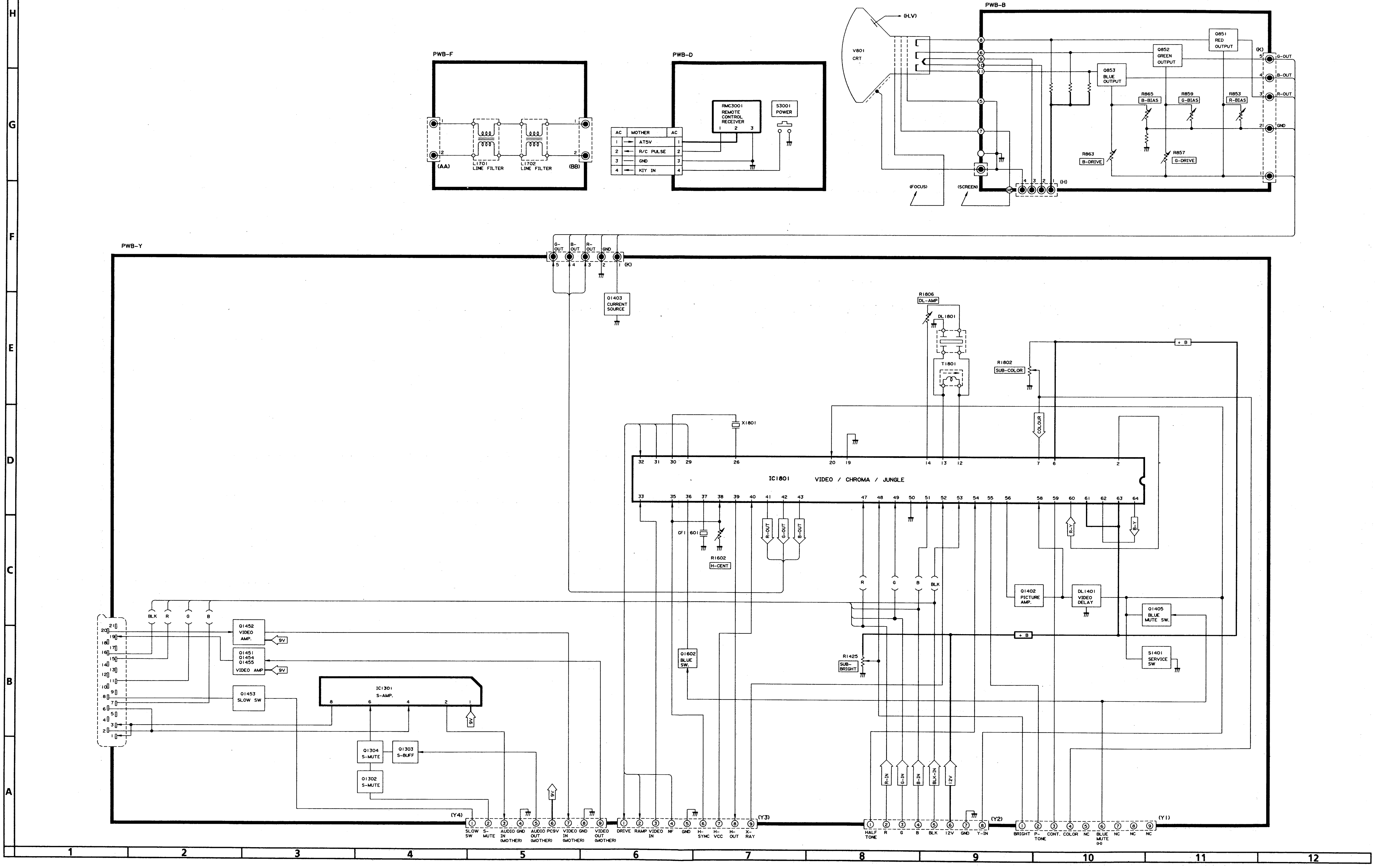
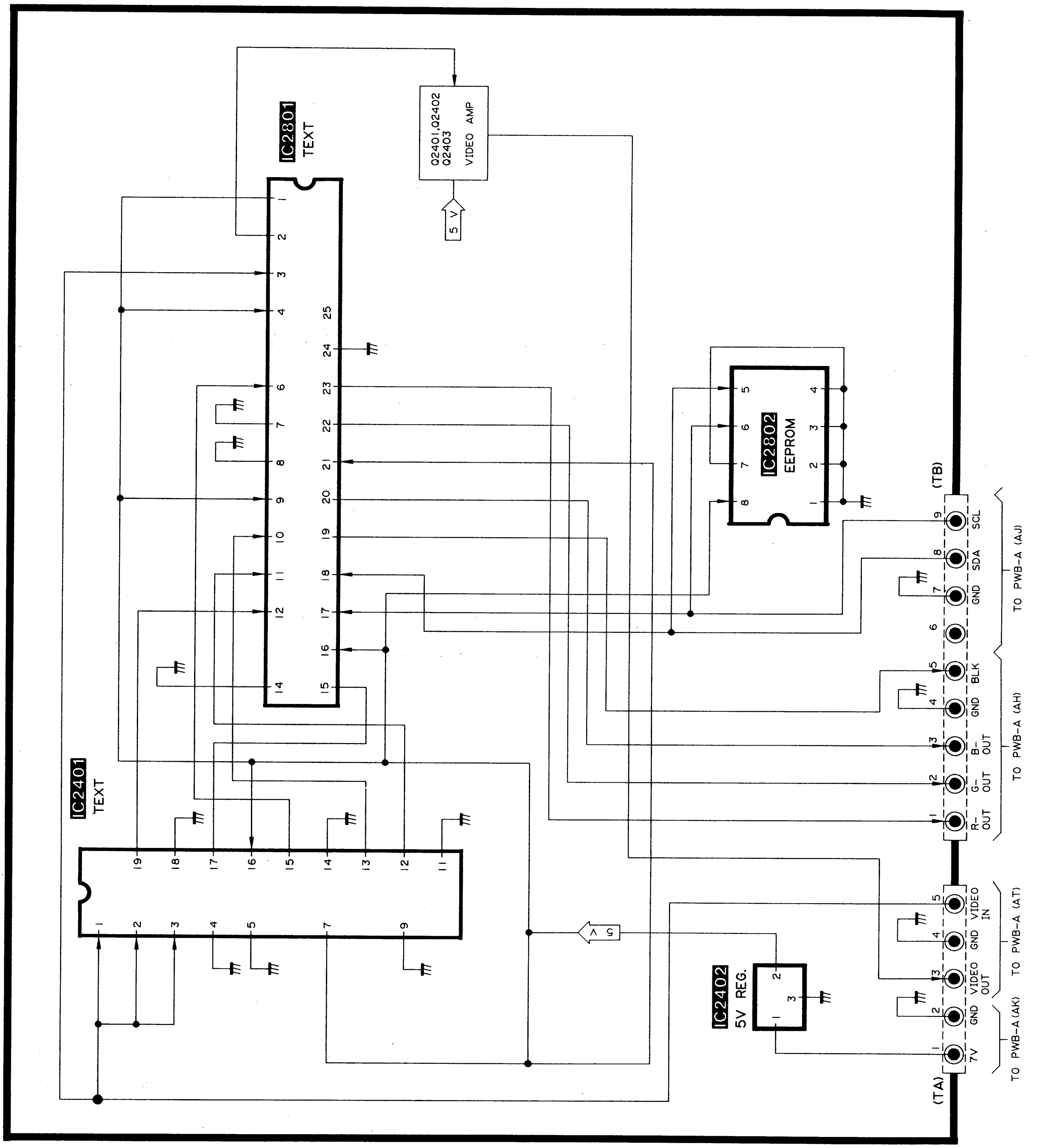
12
PWB-F
(AA)
(BB)
L1701 LINE FILTER
L1702 LINE FILTER
PWB-D
RMC3001 REMOTE CONTROL RECEIVER
S3001 POWER
AC
MOTHER
AC
AT5V
R/C PULSE
GND
KIY IN
PWB-B
V801 CRT
(H.V)
(FOCUS)
(SCREEN)
(H)
(K)
Q853 BLUE OUTPUT
Q852 GREEN OUTPUT
W851 RED OUTPUT
R865 B-BIAS
R859 G-BIAS
R853 R-BIAS
R863 B-DRIVE
R857 G-DRIVE
G-OUT
B-OUT
R-OUT
GND
PWB-Y
Q1403 CURRENT SOURCE
R1806 DL-AMP
DL1801
T1801
R1802 SUB-COLOR
COLOUR
+B
X1801
IC1801 VIDEO / CHROMA / JUNGLE
NF
RAMP
XTAL
DRIVE
3.58
NTSC ID
4.43
APC
SECAM DISC
SECAM ID
PAL ID
SW3
P/N
GND
SECAM 50/60
ACC FILTER
IHDL PHASE
COL
R-Y OUT
SYNC SEP
GATE CONT
SAND CASTLE
AFC
VCO
HOUT
HVCC
OUTPUT R G B
BRIGHT
X-RAY
TV/ RGB
P-TONE
Y
CONT
IN R-Y
VCC
IN B-Y
OUT B-Y
CF1601
R1602 H-CENT
R-OUT
G-OUT
B-OUT
R-Y
B-Y
R
G
B
BLK
Q1402 PICTURE AMP.
DL1401 VIDEO DELAY
Q1405 BLUE MUTE SW.
S1401 SERVICE SW
R1425 SUB-BRIGHT
Q1602 BLUE SW.
Q1452 VIDEO AMP.
Q1451 Q1454 Q1455 VIDEO AMP
Q1453 SLOW SW
9V
IC1301 S-AMP.
Q1304 S-MUTE
Q1303 S-BUFF
Q1302 S-MUTE
R-IN
G-IN
B-IN
BLK-IN
12V
(Y4)
SLOW SW
S-MUTE
AUDIO IN (MOTHER)
GND
AUDIO OUT (MOTHER)
PC9V
VIDEO IN (MOTHER)
GND
VIDEO OUT (MOTHER)
(Y3)
DRIVE
RAMP
NC
NF
GND
H-SYNC
H-VCC
H-OUT
X-RAY
(Y2)
NC
R
G
B
BLK
12V
GND
Y-IN
(Y1)
BRIGHT
P-TONE
CONT.
COLOR
NC
BLUE MUTE (H)
NC
NC
NC

MODEL VT-5400S BLOCK DIAGRAM OF TV SECTION-1/
MODELL VT-5400S BLOCKSCHALTBILD DES TV-TEILS-1


H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
PWB-F
(AA)
L1701 LINE FILTER
L1702 LINE FILTER
(BB)
PWB-D
RMC3001 REMOTE CONTROL RECEIVER
S3001 POWER
AC
MOTHER
AT5V
R/C PULSE
GND
KEY IN
(H,V)
V801 CRT
(FOCUS)
(SCREEN)
PWB-B
Q851 RED OUTPUT
Q852 GREEN OUTPUT
Q853 BLUE OUTPUT
R865 B-BIAS
R859 G-BIAS
R853 R-BIAS
R863 B-DRIVE
R857 G-DRIVE
(K)
G-OUT
B-OUT
R-OUT
GND
(H)
PWB-Y
Q1403 CURRENT SOURCE
R1806 DL-AMP
DL1801
T1801
R1802 SUB-COLOR
+B
X1801
COLOUR
IC1801 VIDEO / CHROMA / JUNGLE
CF1601
R1602 H-CENT
R-OUT
G-OUT
B-OUT
R-Y
B-Y
R
G
B
BLK
Q1402 PICTURE AMP.
DL1401 VIDEO DELAY
Q1405 BLUE MUTE SW.
S1401 SERVICE SW
R1425 SUB-BRIGHT
Q1602 BLUE SW.
Q1452 VIDEO AMP.
Q1451 Q1454 Q1455 VIDEO AMP
Q1453 SLOW SW
9V
IC1301 S-AMP.
Q1304 S-MUTE
Q1303 S-BUFF
Q1302 S-MUTE
R-IN
G-IN
B-IN
BLK-IN
12V
(Y4)
SLOW SW
S-MUTE
AUDIO IN (MOTHER)
GND
AUDIO OUT (MOTHER)
PC9V
VIDEO IN (MOTHER)
GND
VIDEO OUT (MOTHER)
(Y3)
DRIVE
RAMP
VIDEO IN
NF
GND
H-SYNC
H-VCC
H-OUT
X-RAY
(Y2)
HALF TONE
R
G
B
BLK
12V
GND
Y-IN
(Y1)
BRIGHT
P-TONE
CONT.
COLOR
NC
BLUE MUTE (H)
NC
NC
NC

MODEL VT-5400S BLOCK DIAGRAM OF TV SECTION/ MODELL VT-5400S BLOCKSCHALTBILD DES TV-TEILS


IC2801
TEXT
Q2401,Q2402
Q2403
VIDEO AMP
5 V
IC2802
EEPROM
(TB)
SCL
SDA
GND
BLK
GND
B-OUT
G-OUT
R-OUT
TO PWB-A (AJ)
TO PWB-A (AH)
IC2401
TEXT
5 V
IC2402
5V REG.
VIDEO IN
GND
VIDEO OUT
GND
7V
(TA)
TO PWB-A (AT)
TO PWB-A (AK)

DESCRIPTION OF TV SECTION SCHEMATIC DIAGRAM

SAFETY NOTE:

1. *DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACEING PARTS.*
2. *SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.*

IMPORTANT SAFETY NOTICE:

BE SURE TO USE GENUINE PARTS FOR SECURING THE SAFETY AND RELIABILITY OF THE SET.
PARTS MARKED WITH "⚠" (▨) ARE IMPORTANT FOR MAINTAINING THE SAFETY OF THE SET. BE SURE TO REPLACE THESE PARTS WITH SPECIFIED ONES FOR MAINTAINING THE SAFETY AND PERFORMANCE OF THE SET.

SERVICE PRECAUTION:

THE AREA ENCLOSED BY THIS LINE (- - - - - - -) IS DIRECTLY CONNECTED WITH AC MAINS VOLTAGE.
WHEN SERVICING THE AREA, CONNECT AN ISOLATING TRANSFORMER BETWEEN TV RECEIVER AC LINE TO ELIMINATE HAZARD OF ELECTRIC SHOCK.

CAUTION:

This circuit diagram is original one, therefore there may be a slight difference from yours.

NOTES:

1. *The unit of resistance "ohm" is omitted.*
   (K = 1000 ohms, M = 1Meg ohm).
2. *All resistors are 1/8 watt, unless otherwise noted.*
3. *The unit of capacitance "F" is omitted.*
   (µ = µF, P = µµF).
4. *The values in parentheses are the ones in the PB mode; the values without parentheses are the ones in the REC mode.*

VOLTAGE MEASUREMENT CONDITIONS:

1. *DC voltages are measured between points indicated and chassis ground by VTVM, with AC 110~240V, 50/60Hz supplied to unit and all controls are set to normal viewing picture unless otherwise noted.*
2. *Voltages are measured with 10000µV B&W or colour signal.*

WAVEFORM MEASUREMENT CONDITIONS:

10000µV, 87.5% modulated colour bar signal is fed into tuner.

BESCHREIBUNG DES SCHEMADIAGRAMMS DES TV-TEILS

SICHERHEITSHINWEIS:

1. *VOR DEM AUSTAUSCHEN VON TEILEN IMMER DEN NETZSTECKER VON DER STECKDOSE ABZIEHEN.*
2. *HITZEWANNEN FÜR HALBLEITERELEMENTE STELLEN BEI BETRIEBENEM LAUFWERK EINE GEFAHRENQUELLE FÜR ELEKTRISCHE SCHLÄGE DAR.*

WICHTIGER SICHERHEITSHINWEIS:

IMMER NUR ZUM AUSTAUSCH ORIGINALTEILE VERWENDEN, UM DIE SICHERHEIT UND ZUVERLÄSSIGKEIT DES GERÄTES NICHT ZU GEFÄHRDEN.
TEILE, DIE MIT EINEM GEFAHRENSYMBOL "⚠" (▨) GEKENNZEICHNET SIND, SIND FÜR DIE SICHERE FUNKTION DES GERÄTES VON ENTSCHEIDENDER BEDEUTUNG. IMMER DIESE TEILE NUR MIT VORGESCHRIEBENEN AUSTAUSCHTEILEN ERSETZEN, UM DIE SICHERHEIT UND ZUVERLÄSSIGKEIT DES GERÄTES NICHT ZU GEFÄHRDEN.

VORSICHTSMASSREGEL ZUR WARTUNG:

DIE MIT EINER FETTEN GESTRICHELTEN LINIE (- - - - -) EINGEKREISTEN TEILE SIND DIREKT MIT NETZSPANNUNG VERBUNDEN.
BEI WARTUNGSARBEITEN IN DIESEN BEREICHEN IMMER EINEN ISOLIER-TRAFO ZWISCHEN DER EMPFÄNGER-NETZLEITUNG ANSCHLIEßEN, UM DIE GEFAHR ELEKTRISCHER SCHLÄGE ZU BESEITIGEN.

ACHTUNG:

Dieses Schemadiagramm ist neu gezeichnet worden; darum können kleine Unterschiede zu dem bei Ihnen vorhandenen vorliegen.

ZUR BEACHTUNG:

1. *Die Einheit füs Widerstand "Ohm" ist bei den Angaben weggelassen worden.*
   (K = 1000 Ohm, M = 1 Mega-Ohm)
2. *Alle Widerstände sind 1/8 Watt, wenn nicht anders angegeben.*
3. *Die Einheit füs Kapazität "F" ist weggelassen worden.*
   (µ = µF, P = µµF).
4. *Die in Klammern gegebenen Werte beziehen sich auf Wiedergabe-Betriebsart; die Werte ohne Klammern beziehen sich auf Aufnahme-Betriebsart.*

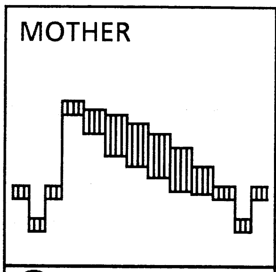
BEDINGUNGEN ZUR SPANNUNGSMESSUNG:

1. *Gleichspannungen werden zwischen angegebenen Punkten und Cassis-Masse mit VTVM gemessen, bei angelegter Wechselspannung von 110 ~ 240 V, 50/60 Hz und allen Reglern auf normale Bildbetrachtung gestellt, wenn nicht anders angegeben.*
2. *Spannungen werden mit 10.000 µC Schwarzweiß- oder Farbsignal gemessen.*

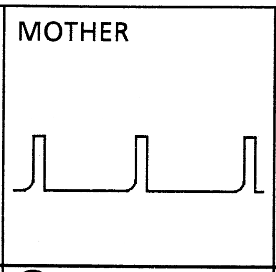
BEDINGUNGEN ZUR H-LKURVENMESSUNG:

10.000 µC, 87,5% moduliertes Farbbalken-Signal wird an den Tuner angelegt.

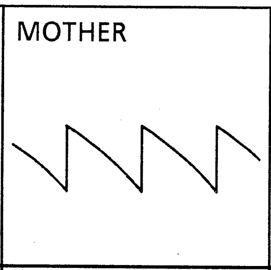
WAVEFORMS
HÜLLKURVEN



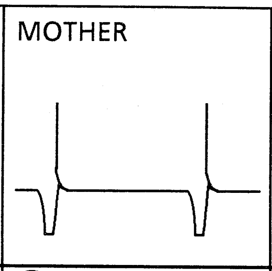
① 2.0 Vp-p (H)



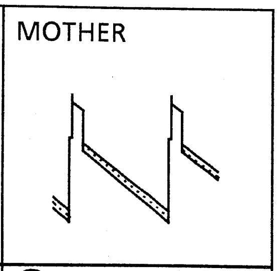
② 8.8 Vp-p (H) VT-3700S
8.5 Vp-p (H) VT-5400S



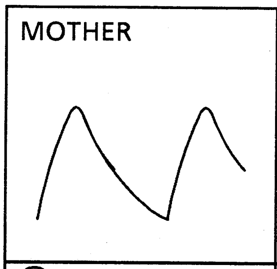
③ 2.0 Vp-p (V)



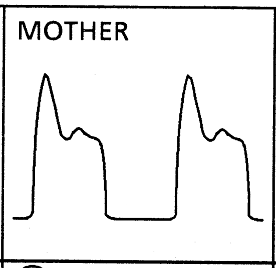
④ 2.2 Vp-p (V) VT-3700S
1.5 Vp-p (V) VT-5400S



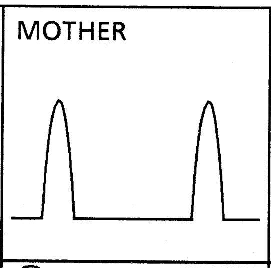
⑤ 55 Vp-p (V)



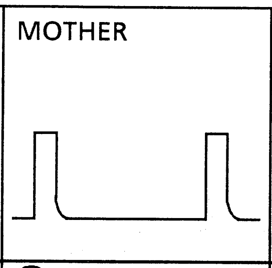
⑥ 1.2 Vp-p (H)



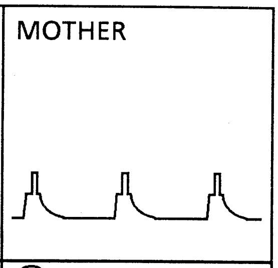
⑦ 165 Vp-p (H) VT-3700S
96 Vp-p (H) VT-5400S



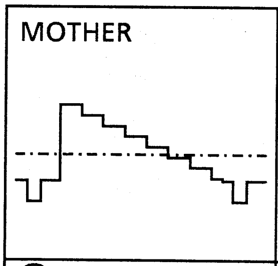
⑧ 950 Vp-p (H)



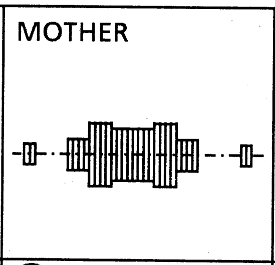
⑨ 13 Vp-p (H)



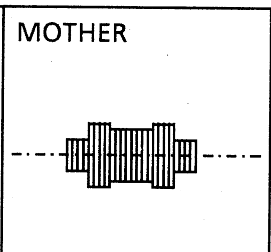
⑩ 10 Vp-p (H)



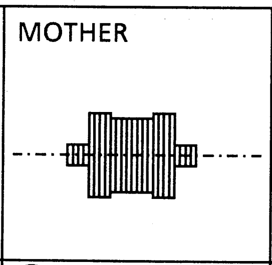
⑪ 0.47 Vp-p (H)



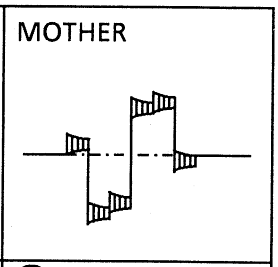
⑫ 0.56 Vp-p (H)



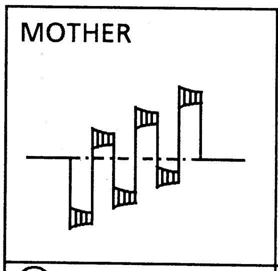
⑬ 2.6 Vp-p (H)



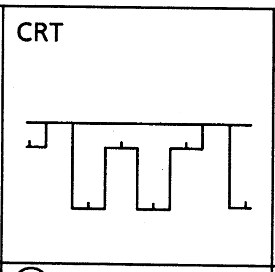
⑭ 0.42 Vp-p (H)



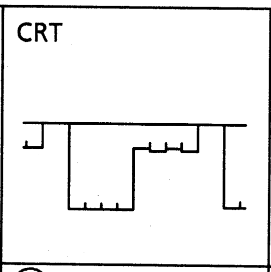
⑮ 0.92 Vp-p (H)



⑯ 0.67 Vp-p (H)



⑰ 78 Vp-p (H) VT-3700S
94 Vp-p (H) VT-5400S



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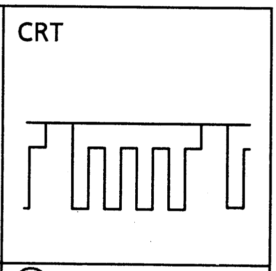
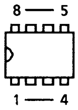
85 Vp-p (H) VT-5400S



⑲ 78 Vp-p (H) VT-3700S
88 Vp-p (H) VT-5400S

SOLID STATE DEVICE BASE DIAGRAM
FESTKÖRPERGERÄT-BASISDIAGRAMM

TOP VIEW/DRAUFSICHT



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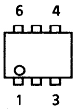

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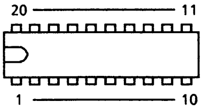

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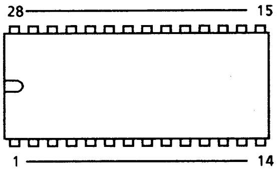

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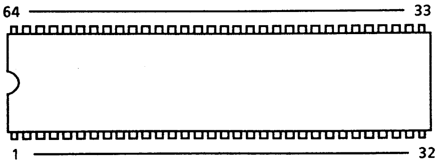
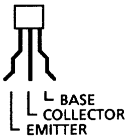


iX2443CE

SIDE VIEW/SEITENANSICHT


BASE
COLLECTOR
EMITTER

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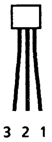

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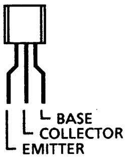
BASE
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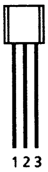

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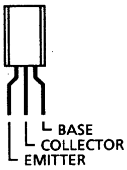
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COLLECTOR
EMITTER

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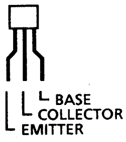
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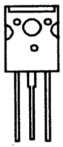

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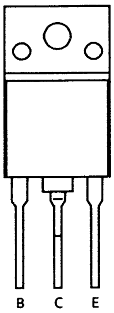

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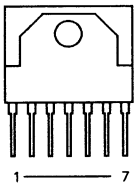

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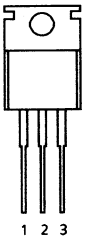

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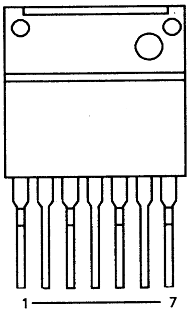

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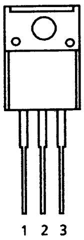

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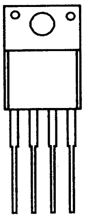

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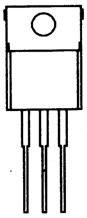

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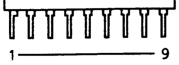

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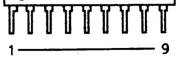

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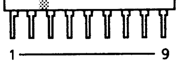

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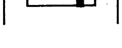
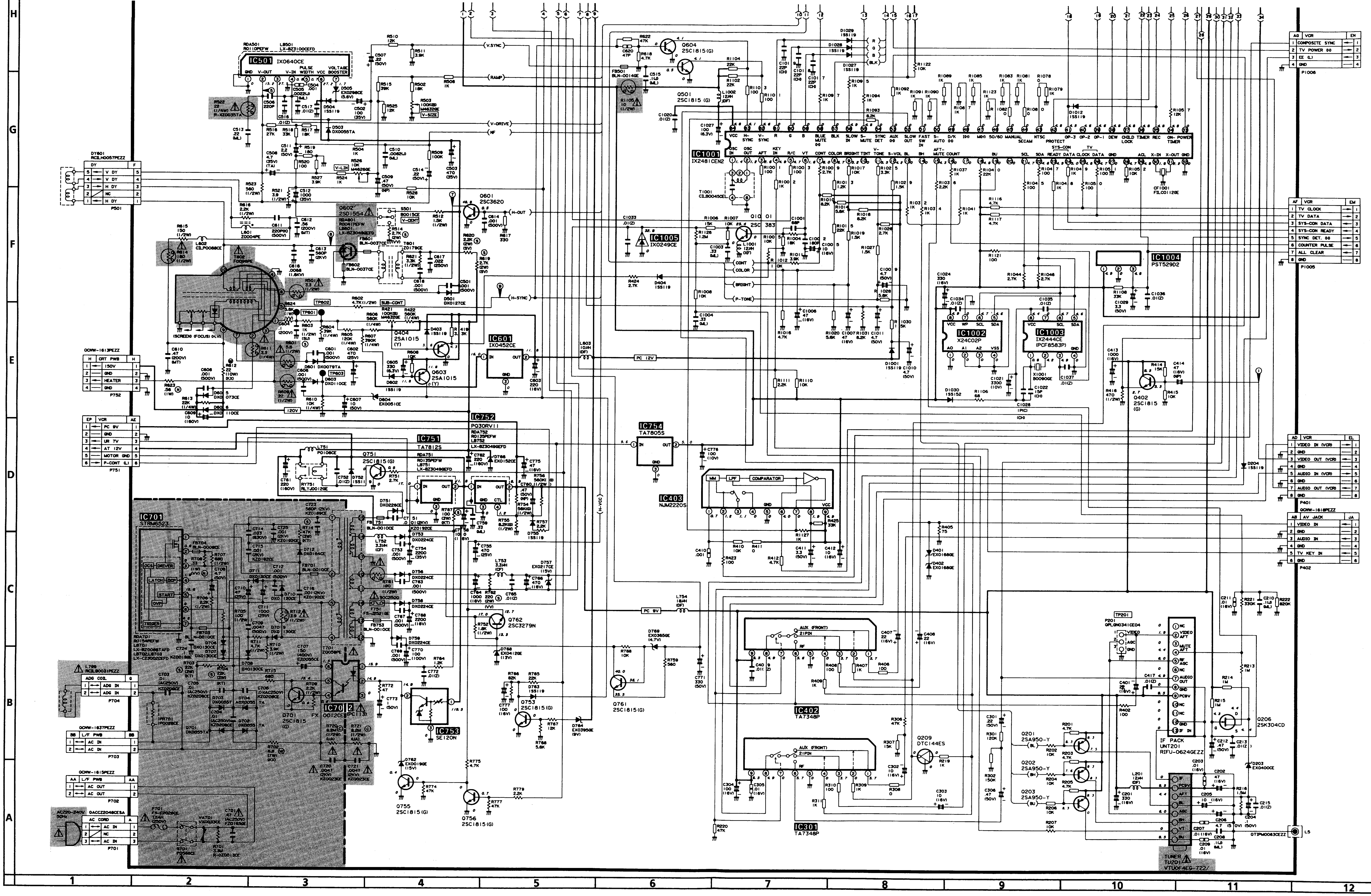
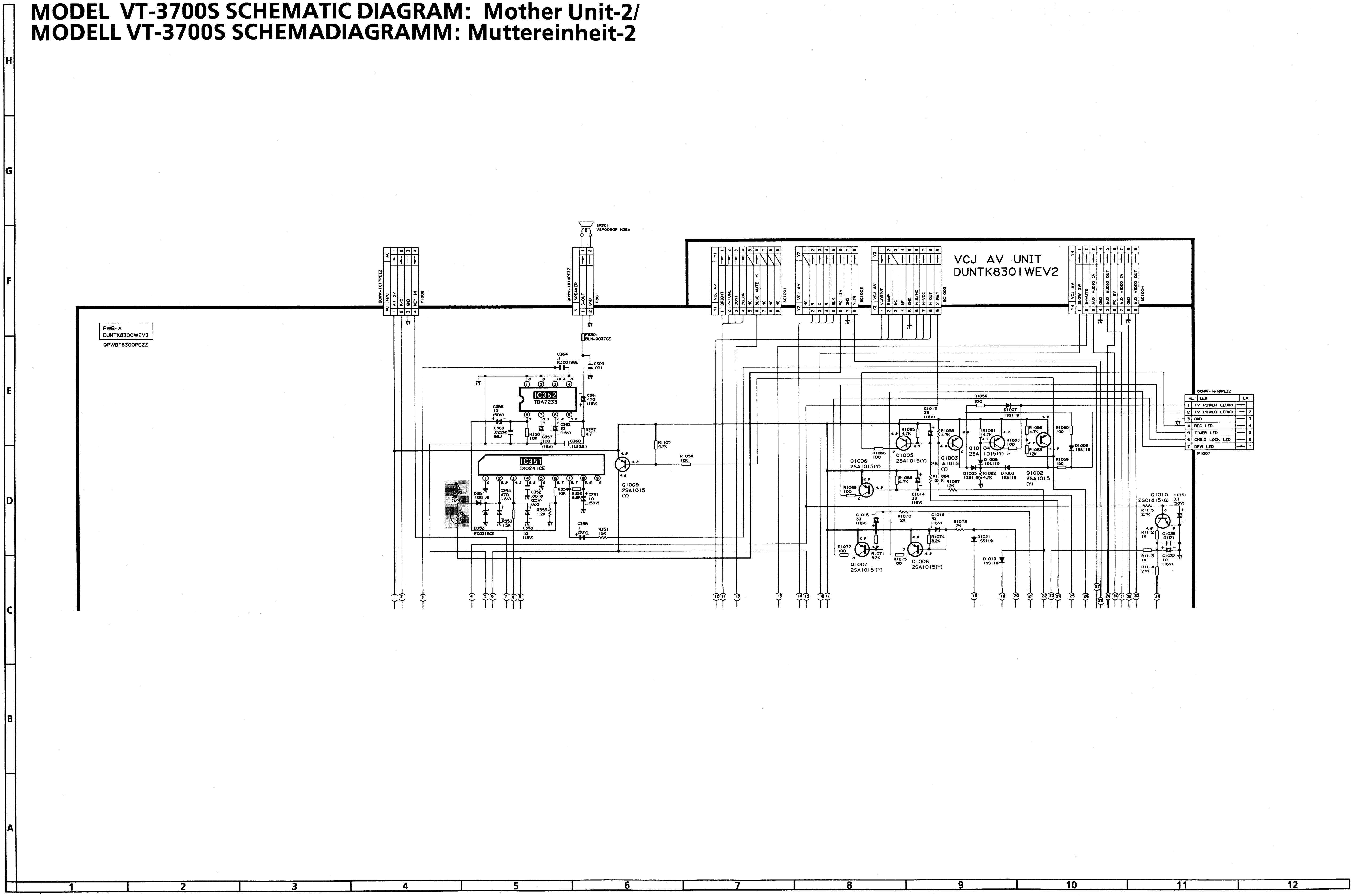


iX0249CE

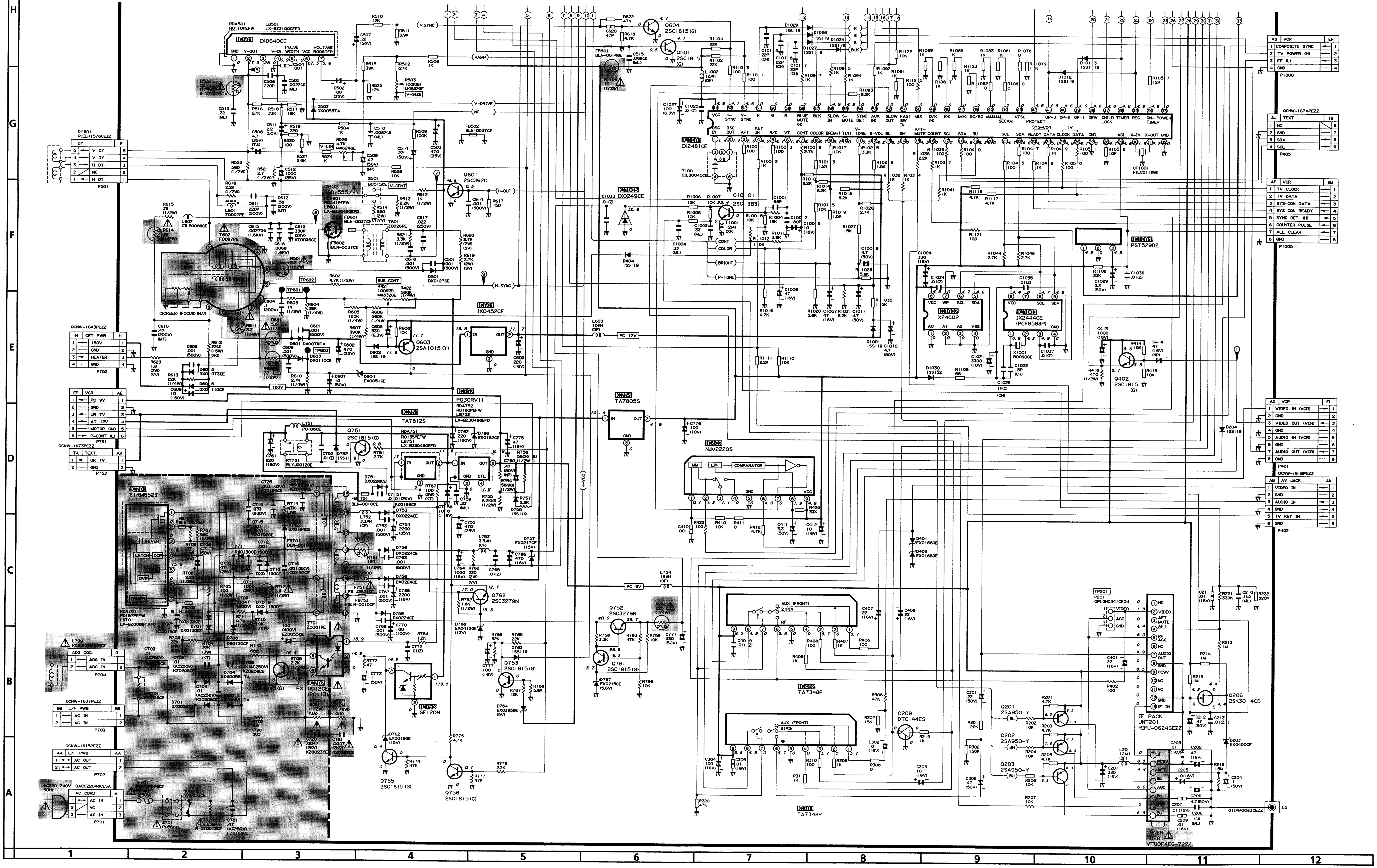
MODEL VT-3700S SCHEMATIC DIAGRAM: Mother Unit-1/
MODELL VT-3700S SCHEMADIAGRAMM: Muttereinheit-1


IC501 IX0640CE
IC1001 IX2481CEN2
IC1005 IX0249CE
IC1004 PST52902
IC1002 X24C02P
IC1003 IX2444CE (PCF8583P)
IC601 IX0452CE
IC752 PQ30RV11
IC751 TA7812S
IC754 TA7805S
IC403 NJM2220S
IC701 STRM6523
IC702 (PC113)
IC753 SE120N
IC402 TA7348P
IC301 TA7348P
Q601 2SC3620
Q602 2SD1554
Q604 2SC1815(G)
Q501 2SC1815(G)
Q1001 2SC383
Q404 2SA1015
Q603 2SA1015
Q402 2SC1815(G)
Q751 2SC1815(G)
Q762 2SC3279N
Q753 2SC1815(G)
Q761 2SC1815(G)
Q755 2SC1815(G)
Q756 2SC1815(G)
Q701 2SC1815(G)
Q209 DTC144ES
Q201 2SA950-Y
Q202 2SA950-Y
Q203 2SA950-Y
Q206 2SK304CD
IF PACK UNT201 RIFU-0624GEZZ
TUNER TU201 VTUOF4EG-722/
P501 DY
P752 CRT PWB
P751 VCR
P704 ADG COIL
P703 L/F PWB
P702 L/F PWB
P701 AC CORD
P1006 VCR
P1005 VCR
P401 VCR
P402 AV JACK
PC 12V
PC 9V
120V
H G F E D C B A
1 2 3 4 5 6 7 8 9 10 11 12

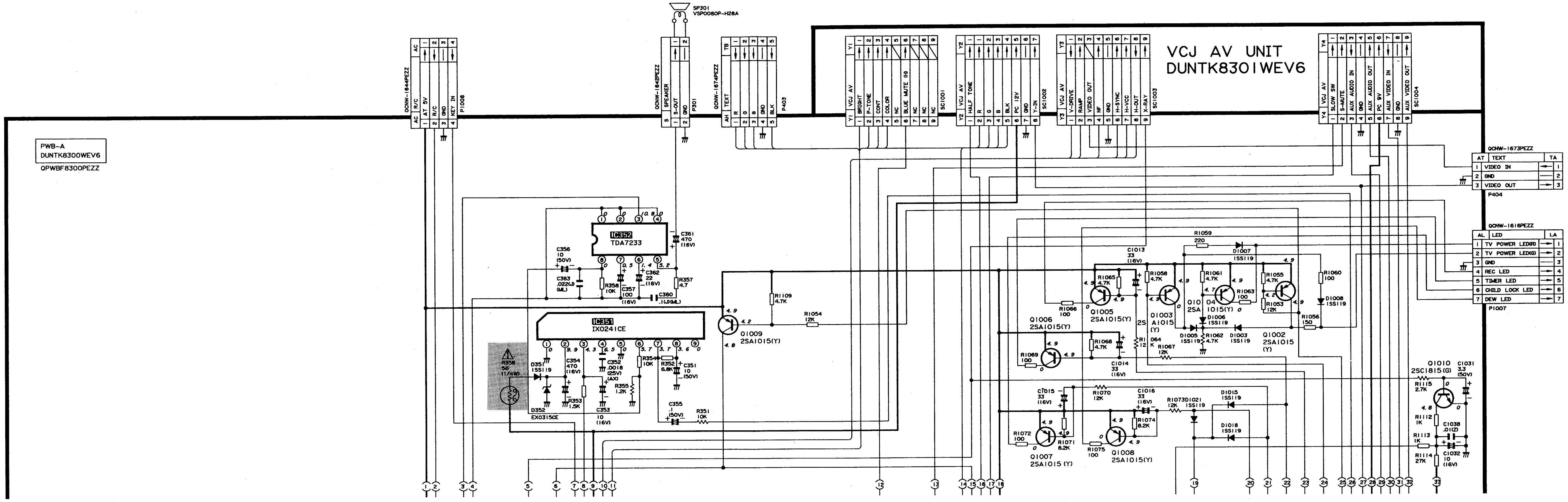
MODEL VT-3700S SCHEMATIC DIAGRAM: Mother Unit-2/ MODELL VT-3700S SCHEMADIAGRAMM: Muttereinheit-2


H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
PWB-A
DUNTK8300WEV3
QPWBF8300PEZZ
VCJ AV UNIT
DUNTK8301WEV2
SP301
VSP0080P-H28A
P1006
P301
SC1001
SC1002
SC1003
SC1004
P1007
IC352
TDA7233
IC351
IX0241CE
FB301
BLN-0037CE
C364
KZ0019CE
C309
.001
C361
470
(16V)
C356
10
(50V)
C363
.022(J)
R358
10K
C357
100
(16V)
C362
22
(16V)
C360
R357
4.7
R356
36
(1/4W)
D351
1SS119
D352
EX0315CE
C354
470
(16V)
C352
.0018
(25V)
C353
10
(16V)
R353
1.5K
R355
1.2K
R354
10K
R352
6.8K
C351
10
(50V)
C355
.1
(50V)
R351
15K
Q1009
2SA1015
(Y)
R1100
4.7K
R1054
12K
R1059
220
D1007
1SS119
C1013
33
(16V)
R1065
4.7K
R1058
4.7K
R1061
4.7K
R1063
100
R1055
4.7K
R1060
100
D1008
1SS119
R1066
100
Q1005
2SA1015(Y)
Q1004
2SA1015(Y)
Q1003
2SA1015
(Y)
R1053
12K
R1056
150
Q1006
2SA1015(Y)
D1006
1SS119
D1005
1SS119
R1062
4.7K
D1003
1SS119
Q1002
2SA1015
(Y)
R1069
100
R1068
4.7K
R1064
12K
R1067
12K
C1014
33
(16V)
C1015
33
(16V)
R1070
12K
C1016
33
(16V)
R1073
12K
D1021
1SS119
R1072
100
R1071
8.2K
Q1007
2SA1015 (Y)
R1075
100
Q1008
2SA1015(Y)
R1074
8.2K
D1013
1SS119
Q1010
2SC1815(G)
C1031
3.3
(50V)
R1115
2.7K
R1112
1K
C1038
.01(Z)
R1113
1K
C1032
10
(16V)
R1114
27K
QCNW-1616PEZZ
TV POWER LED(R)
TV POWER LED(G)
GND
REC LED
TIMER LED
CHILD LOCK LED
DEW LED

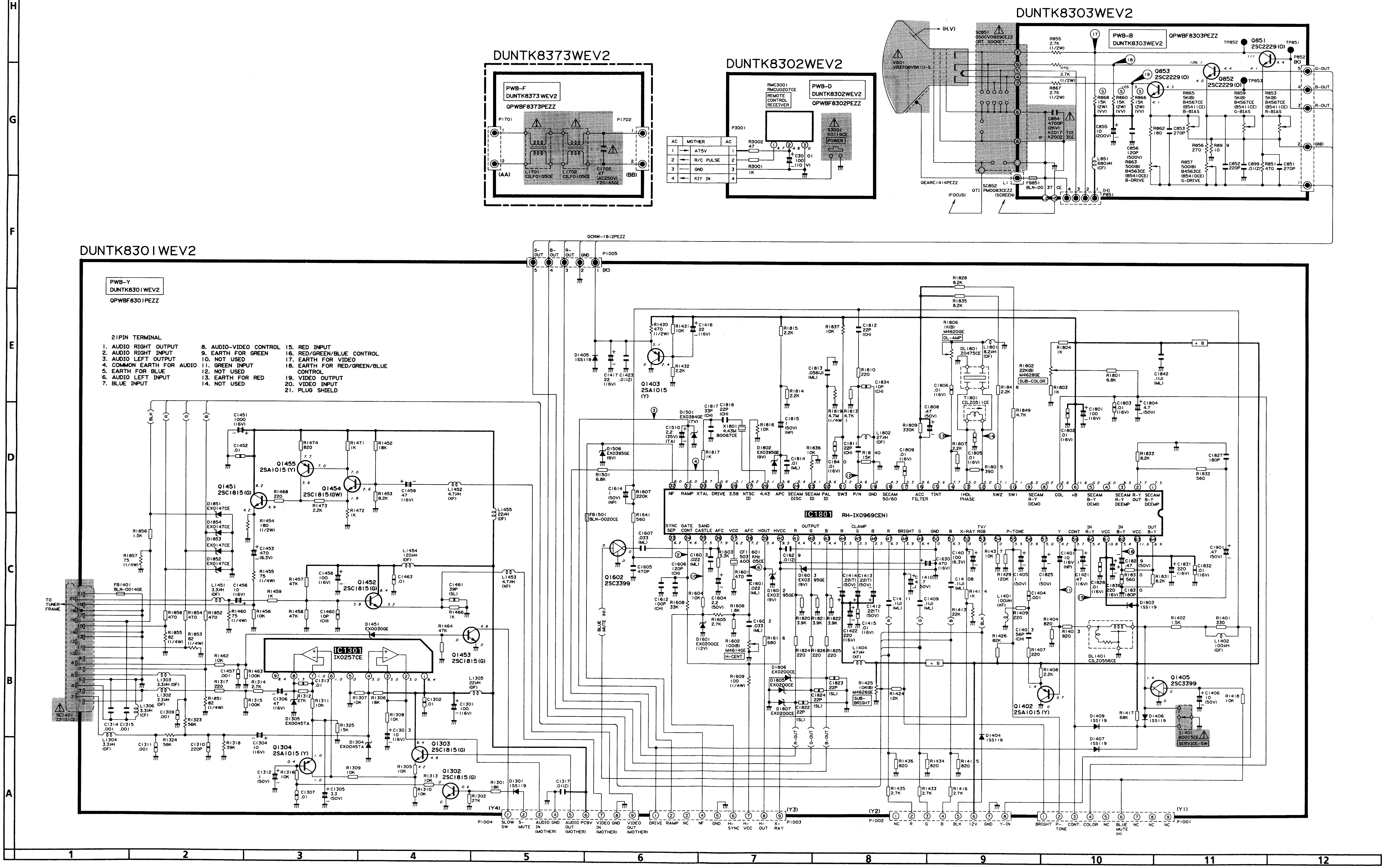
MODEL VT-5400S SCHEMATIC DIAGRAM: Mother Unit-1/
MODELL VT-5400S SCHEMADIAGRAMM: Muttereinheit-1


IC501 IX0640CE
IC601 IX0452CE
IC701 STRM6523
IC702 0012CE (PC113)
IC751 TA7812S
IC752 PQ30RV11
IC753 SE120N
IC754 TA7805S
IC1001 IX2481CE
IC1002 X24C02
IC1003 IX2444CE (PCF8583P)
IC1004 PST529D2
IC1005 IX0249CE
IC403 NJM2220S
IC402 TA7348P
IC301 TA7348P
Q601 2SC3620
Q602 2SD1555
Q603 2SA1015 (Y)
Q604 2SC1815 (G)
Q501 2SC1815
Q701 2SC1815 (G)
Q751 2SC1815 (G)
Q752 2SC3279N
Q753 2SC1815 (G)
Q755 2SC1815 (G)
Q756 2SC1815 (G)
Q761 2SC1815 (G)
Q762 2SC3279N
Q402 2SC1815 (G)
Q201 2SA950-Y
Q202 2SA950-Y
Q203 2SA950-Y
Q206 2SK30 4CD
Q209 DTC144ES
IF PACK UNT201 RIFU-0624GEZZ
TUNER TU201 VTU0F4EG-722/
DY601 RCILH1576CEZZ
P501 DY: 5 V DY, 4 V DY, 3 H DY, 2 NC, 1 H DY
QCNW-1643PEZZ
P752 H CRT PWB H: 1 150V, 2 GND, 3 HEATER, 4 GND
P751 EP VCR AE: 1 PC 9V, 2 GND, 3 UR TV, 4 AT 12V, 5 MOTOR GND, 6 P-CONT (L)
QCNW-1673PEZZ
P753 TA TEXT AK: 1 UR TV, 2 GND
L799 RCILG0364CEZZ
P704 G ADG COIL G: 1 ADG IN, 2 ADG IN
QCNW-1637PEZZ
P703 BB L/F PWB: 1 AC IN, 2 AC IN
QCNW-1615PEZZ
P702 AA L/F PWB AA: 1 AC OUT, 2 AC OUT
AC220-240V 50Hz QACCZ2048CESA
P701 A AC CORD A: 1 AC IN, 2 NC, 3 AC IN
P1006 AG VCR EN: 1 COMPOSITE SYNC, 2 TV POWER ON, 3 EE (L), 4 GND
QCNW-1674PEZZ
P405 AJ TEXT TB: 1 NC, 2 GND, 3 SDA, 4 SCL
P1005 AF VCR EM: 1 TV CLOCK, 2 TV DATA, 3 SYS-CON DATA, 4 SYS-CON READY, 5 SYNC DET. ON, 6 COUNTER PULSE, 7 ALL CLEAR, 8 GND
P401 AD VCR EL: 1 VIDEO IN (VCR), 2 GND, 3 VIDEO OUT (VCR), 4 GND, 5 AUDIO IN (VCR), 6 GND, 7 AUDIO OUT (VCR), 8 GND
QCNW-1618PEZZ
P402 AB AV JACK JA: 1 VIDEO IN, 2 GND, 3 AUDIO IN, 4 GND, 5 TV KEY IN, 6 GND
QTIP0083CEZZ
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

MODEL VT-5400S SCHEMATIC DIAGRAM: Mother Unit-2/ MODELL VT-5400S SCHEMADIAGRAMM: Muttereinheit-2


PWB-A
DUNTK8300WEV6
QPWBF8300PEZZ
QCNW-1644PEZZ
AC
R/C
1 AT 5V
2 R/C
3 GND
4 KEY IN
P1008
SP301
VSP0080P-H28A
QCNW-1642PEZZ
S
SPEAKER
1 S-OUT
2 GND
P301
QCNW-1674PEZZ
AH
TB
TEXT
1 R
2 G
3 B
4 GND
5 BLK
P403
VCJ AV UNIT
DUNTK8301WEV6
Y1
VCJ AV
1 BRIGHT
2 P-TONE
3 CONT
4 COLOR
5 NC
6 BLUE MUTE (H)
7 NC
8 NC
9 NC
SC1001
Y2
VCJ AV
1 HALF TONE
2 R
3 G
4 B
5 BLK
6 PC 12V
7 GND
8 Y-IN
SC1002
Y3
VCJ AV
1 V-DRIVE
2 RAMP
3 VIDEO OUT
4 NF
5 GND
6 H-SYNC
7 H-VCC
8 H-OUT
9 X-RAY
SC1003
Y4
VCJ AV
1 SLOW SW
2 S-MUTE
3 AUX AUDIO IN
4 GND
5 AUX AUDIO OUT
6 PC 9V
7 AUX VIDEO IN
8 GND
9 AUX VIDEO OUT
SC1004
QCNW-1673PEZZ
AT TEXT TA
1 VIDEO IN 1
2 GND 2
3 VIDEO OUT 3
P404
QCNW-1616PEZZ
AL LED LA
1 TV POWER LED(R) 1
2 TV POWER LED(G) 2
3 GND 3
4 REC LED 4
5 TIMER LED 5
6 CHILD LOCK LED 6
7 DEW LED 7
P1007
IC352
TDA7233
C361 470 (16V)
C356 10 (50V)
C363 .022(J) (ML)
R358 10K
C357 100 (16V)
C362 22 (16V)
R357 4.7
C360 .1(J)(ML)
IC351
IX0241CE
R358 56 (1/4W)
D351 1SS119
D352 EX0315CE
C354 470 (16V)
R353 1.5K
C352 .0018 (25V) (AX)
C353 10 (16V)
R355 1.2K
R354 10K
R352 6.8K
C351 10 (50V)
C355 .1 (50V)
R351 10K
R1109 4.7K
R1054 12K
Q1009 2SA1015(Y)
C1013 33 (16V)
R1065 4.7K
R1066 100
Q1005 2SA1015(Y)
R1058 4.7K
Q1003 2SA1015 (Y)
R1059 220
D1007 1SS119
R1061 4.7K
R1063 100
Q1004 2SA1015(Y)
R1055 4.7K
R1053 12K
R1060 100
D1008 1SS119
R1056 150
Q1002 2SA1015 (Y)
D1006 1SS119
D1005 1SS119
R1062 4.7K
D1003 1SS119
Q1006 2SA1015(Y)
R1068 4.7K
R1069 100
C1014 33 (16V)
R1064 12K
R1067 12K
C1015 33 (16V)
R1070 12K
C1016 33 (16V)
R1073 12K
D1021 1SS119
D1015 1SS119
D1018 1SS119
R1072 100
R1071 8.2K
Q1007 2SA1015 (Y)
R1075 100
R1074 8.2K
Q1008 2SA1015(Y)
Q1010 2SC1815(G)
C1031 3.3 (50V)
R1115 2.7K
R1112 1K
R1113 1K
R1114 27K
C1038 .01(Z)
C1032 10 (16V)

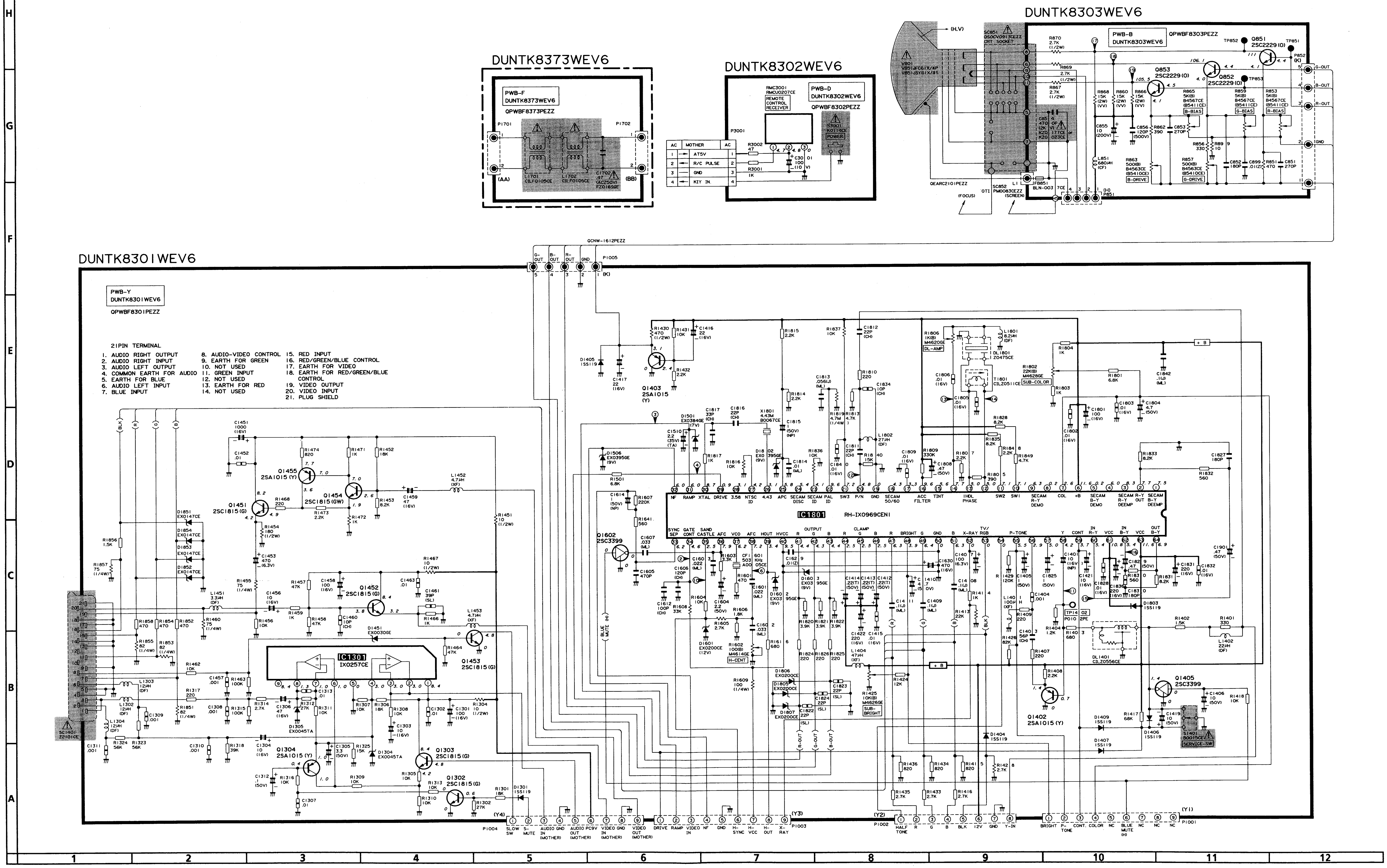
MODEL VT-3700S SCHEMATIC DIAGRAM: CRT Socket, Power SW, R/C, Line Filter, VCJ, A/V Unit/
MODELL VT-3700S SCHEMADIAGRAMM: Bildröhren-Anschluß, Netzschalter, R/C, Line-Filter, VCJ, A/V-Einheit


DUNTK8373WEV2
PWB-F
DUNTK8373WEV2
QPWBF8373PEZZ
P1701
P1702
L1701 CILF0105CE
L1702 CILF0105CE
C1702 .47 (AC250V) FZ0165GE
(AA)
(BB)
DUNTK8302WEV2
RMC3001 RMCU0207CE REMOTE CONTROL RECEIVER
PWB-D
DUNTK8302WEV2
QPWBF8302PEZZ
P3001
AC MOTHER AC
AT5V
R/C PULSE
GND
KEY IN
S3001 K0114CE POWER
DUNTK8303WEV2
PWB-B
DUNTK8303WEV2
QPWBF8303PEZZ
SC851 QSOCV0829CEZZ CRT SOCKET
V801
Q851 2SC2229(O)
Q853 2SC2229(O)
Q852 2SC2229(O)
G-OUT
B-OUT
R-OUT
GND
SC852 PMO083CEZZ
(FOCUS)
(SCREEN)
QCNW-1612PEZZ
P1005
DUNTK8301WEV2
PWB-Y
DUNTK8301WEV2
QPWBF8301PEZZ
IC1801 RH-IX0969CEN1
IC1301 IX0257CE
Q1451 2SC1815(G)
Q1455 2SA1015(Y)
Q1454 2SC1815(GW)
Q1452 2SC1815(G)
Q1453 2SC1815(G)
Q1304 2SA1015(Y)
Q1303 2SC1815(G)
Q1302 2SC1815(G)
Q1403 2SA1015(Y)
Q1602 2SC3399
Q1402 2SA1015(Y)
Q1405 2SC3399
SC1401 Z2101CE
TO TUNER FRAME
S1401 SERVICE-SW
P1004
SLOW SW
S-MUTE
AUDIO IN (MOTHER)
GND
AUDIO OUT (MOTHER)
PC9V
VIDEO IN (MOTHER)
GND
VIDEO OUT (MOTHER)
P1003
DRIVE
RAMP
NC
NF
GND
H-SYNC
H-VCC
H-OUT
X-RAY
P1002
NC
R
G
B
BLK
12V
GND
Y-IN
P1001
BRIGHT
P-TONE
CONT.
COLOR
NC
BLUE MUTE (H)
NC
NC
NC
(Y1)
(Y2)
(Y3)
(Y4)
A
B
C
D
E
F
G
H
1
2
3
4
5
6
7
8
9
10
11
12

21PIN TERMINAL

1.	AUDIO RIGHT OUTPUT	8.	AUDIO-VIDEO CONTROL	15.	RED INPUT
2.	AUDIO RIGHT INPUT	9.	EARTH FOR GREEN	16.	RED/GREEN/BLUE CONTROL
3.	AUDIO LEFT OUTPUT	10.	NOT USED	17.	EARTH FOR VIDEO
4.	COMMON EARTH FOR AUDIO	11.	GREEN INPUT	18.	EARTH FOR RED/GREEN/BLUE CONTROL
5.	EARTH FOR BLUE	12.	NOT USED	19.	VIDEO OUTPUT
6.	AUDIO LEFT INPUT	13.	EARTH FOR RED	20.	VIDEO INPUT
7.	BLUE INPUT	14.	NOT USED	21.	PLUG SHIELD

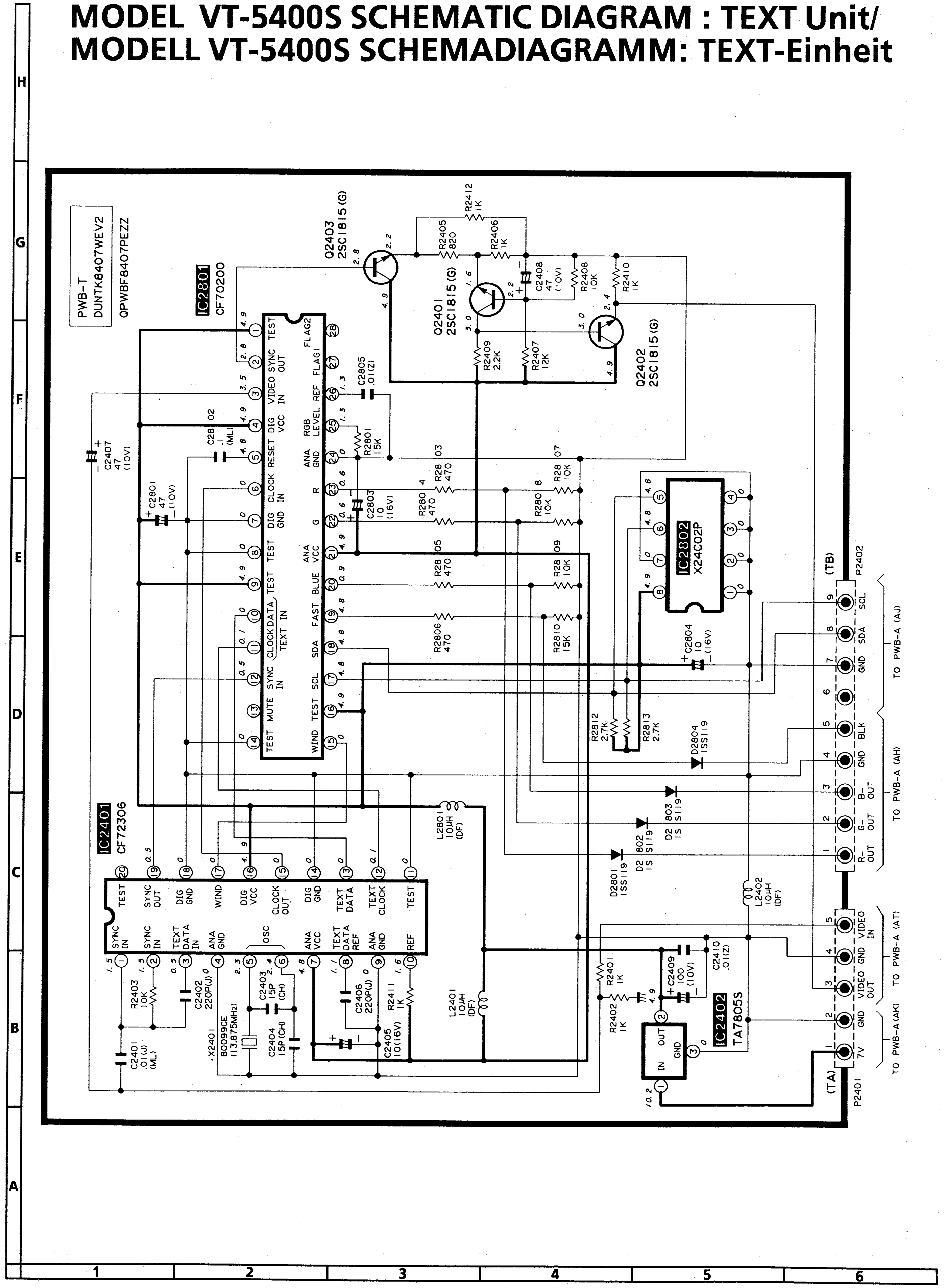
MODEL VT-5400S SCHEMATIC DIAGRAM: CRT Socket,Power SW, R/C, Line Filter, VCJ, A/V Unit
MODELL VT-5400S SCHEMADIAGRAMM: Bildröhren-Anschluß,Netzschalter, R/C, Line-Filter, VCJ, A/V-Einheit


DUNTK8303WEV6
PWB-B
DUNTK8303WEV6
QPWBF8303PEZZ
DUNTK8373WEV6
PWB-F
DUNTK8373WEV6
QPWBF8373PEZZ
DUNTK8302WEV6
PWB-D
DUNTK8302WEV6
QPWBF8302PEZZ
DUNTK8301WEV6
PWB-Y
DUNTK8301WEV6
QPWBF8301PEZZ
IC1801
RH-IX0969CEN1
IC1301
IX0257CE
G-OUT
B-OUT
R-OUT
GND
P1001
P1002
P1003
P1004
P1005
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

21PIN TERMINAL

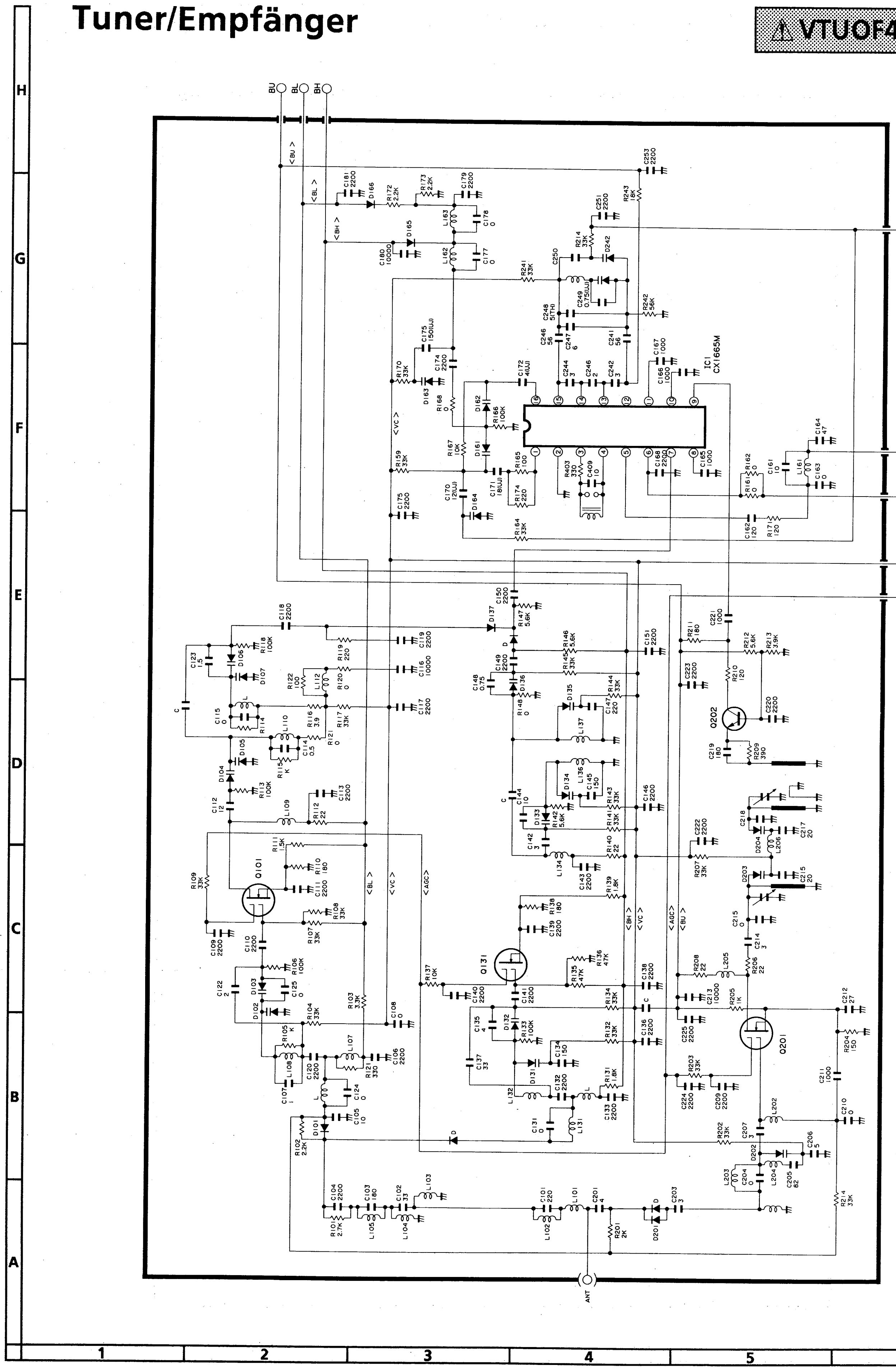
1. AUDIO RIGHT OUTPUT
2. AUDIO RIGHT INPUT
3. AUDIO LEFT OUTPUT
4. COMMON EARTH FOR AUDIO
5. EARTH FOR BLUE
6. AUDIO LEFT INPUT
7. BLUE INPUT
8. AUDIO-VIDEO CONTROL
9. EARTH FOR GREEN
10. NOT USED
11. GREEN INPUT
12. NOT USED
13. EARTH FOR RED
14. NOT USED
15. RED INPUT
16. RED/GREEN/BLUE CONTROL
17. EARTH FOR VIDEO
18. EARTH FOR RED/GREEN/BLUE CONTROL
19. VIDEO OUTPUT
20. VIDEO INPUT
21. PLUG SHIELD

MODEL VT-5400S SCHEMATIC DIAGRAM : TEXT Unit/ MODELL VT-5400S SCHEMADIAGRAMM: TEXT-Einheit


PWB-T
DUNTK8407WEV2
QPWBF8407PEZZ
IC2801
CF70200
IC2401
CF72306
IC2802
X24C02P
IC2402
TA7805S
Q2403
2SC1815 (G)
Q2401
2SC1815 (G)
Q2402
2SC1815 (G)
X2401
B0099CE
(13.875MHz)
L2401
10μH
(DF)
L2402
10μH
(DF)
L2801
10μH
(DF)
D2801
1SS119
D2802
1SS119
D2803
1SS119
D2804
1SS119
P2401
(TA)
P2402
(TB)
SCL
SDA
GND
BLK
B-OUT
G-OUT
R-OUT
VIDEO IN
VIDEO OUT
7V
TO PWB-A (AJ)
TO PWB-A (AH)
TO PWB-A (AT)
TO PWB-A (AK)
SYNC IN
TEXT DATA IN
ANA GND
OSC
ANA VCC
TEXT DATA REF
REF
TEST
SYNC OUT
DIG GND
WIND
DIG VCC
CLOCK OUT
TEXT DATA
TEXT CLOCK
VIDEO SYNC OUT
VIDEO IN
DIG VCC
RESET
CLOCK IN
DIG GND
DATA IN
TEXT IN
MUTE
FLAG1
FLAG2
REF
RGB LEVEL
ANA GND
R
G
ANA VCC
BLUE
FAST
SDA
SCL
IN
OUT
A
B
C
D
E
F
G
H
1
2
3
4
5
6

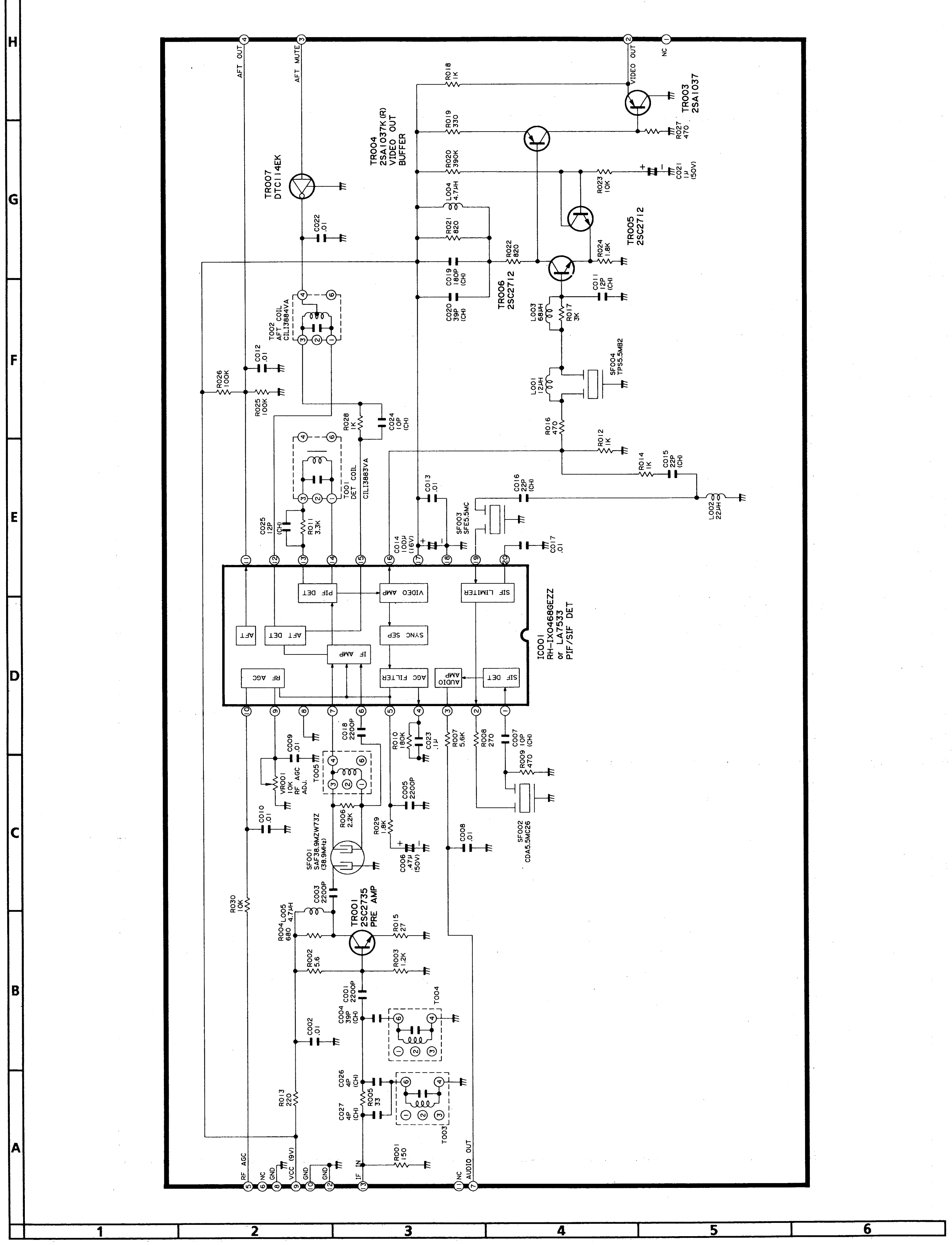
Tuner/Empfänger

⚠ VTUOF4EG-722/


BU
BL
BH
AFT
IF
BM
VC
AGC
ANT
IC1
CX1665M
Q101
Q131
Q201
Q202
A
B
C
D
E
F
G
H
1
2
3
4
5
6

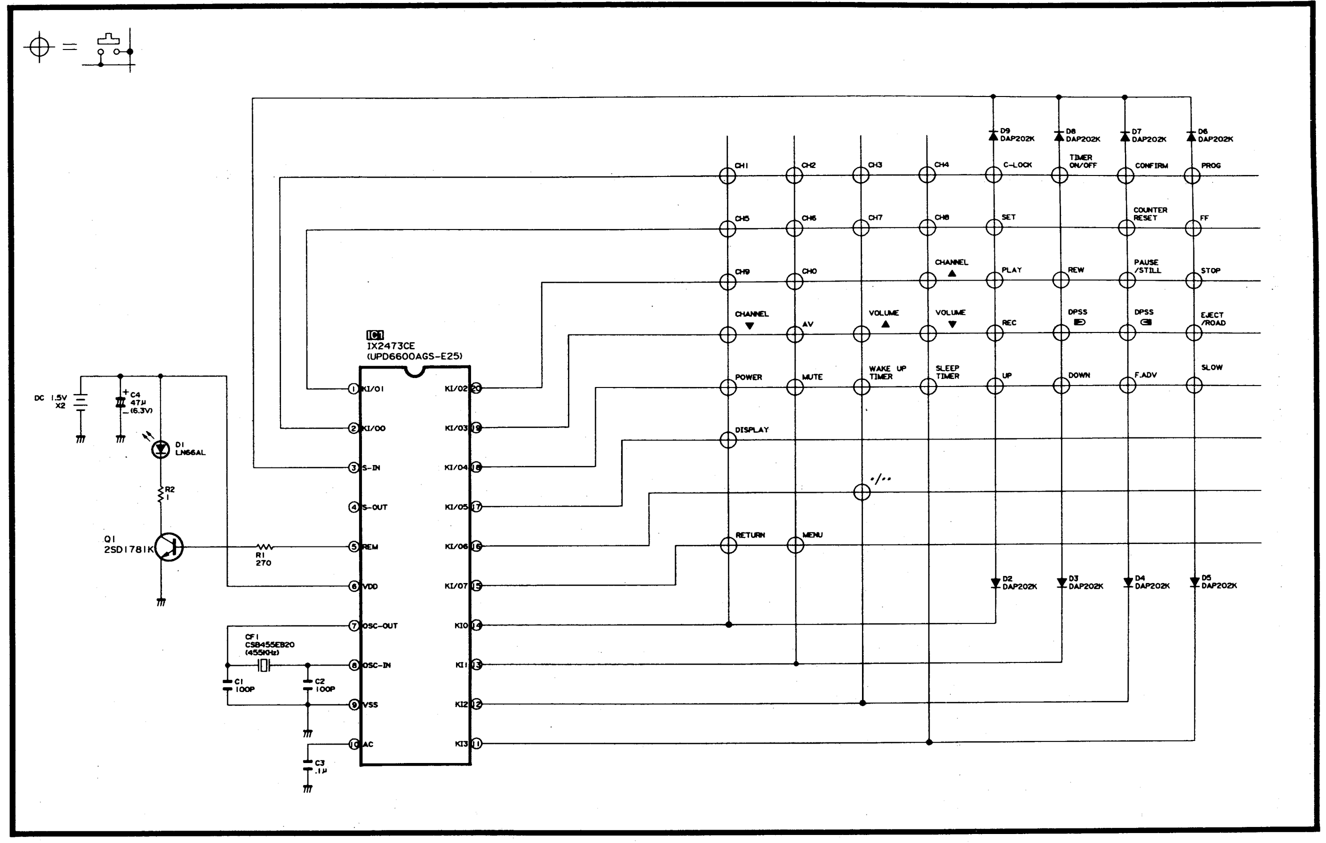
IF-Pack Unit/ZF-Pack-Einheit

RiFU-0624GEZZ


AFT OUT
AFT MUTE
VIDEO OUT
NC
TR003 2SA1037
TR004 2SA1037K (R) VIDEO OUT BUFFER
TR007 DTC114EK
TR005 2SC2712
TR006 2SC2712
T002 AFT COIL
T001 DET COIL
SF004 TPS5.5MB2
SF003 SFE5.5MC
PIF DET
VIDEO AMP
SIF LIMITER
AFT
AFT DET
SYNC SEP
IF AMP
RF AGC
AGC FILTER
AUDIO AMP
SIF DET
IC001 RH-IX0468GEZZ or LA7533 PIF/SIF DET
VR001 10K RF AGC ADJ.
T005
SF001 SAF38.9MZW73Z
SF002 CDA5.5MC26
TR001 2SC2735 PRE AMP
T004
T003
RF AGC
NC
GND
VCC (9V)
GND
IF IN
NC
AUDIO OUT
H
G
F
E
D
C
B
A
1
2
3
4
5
6

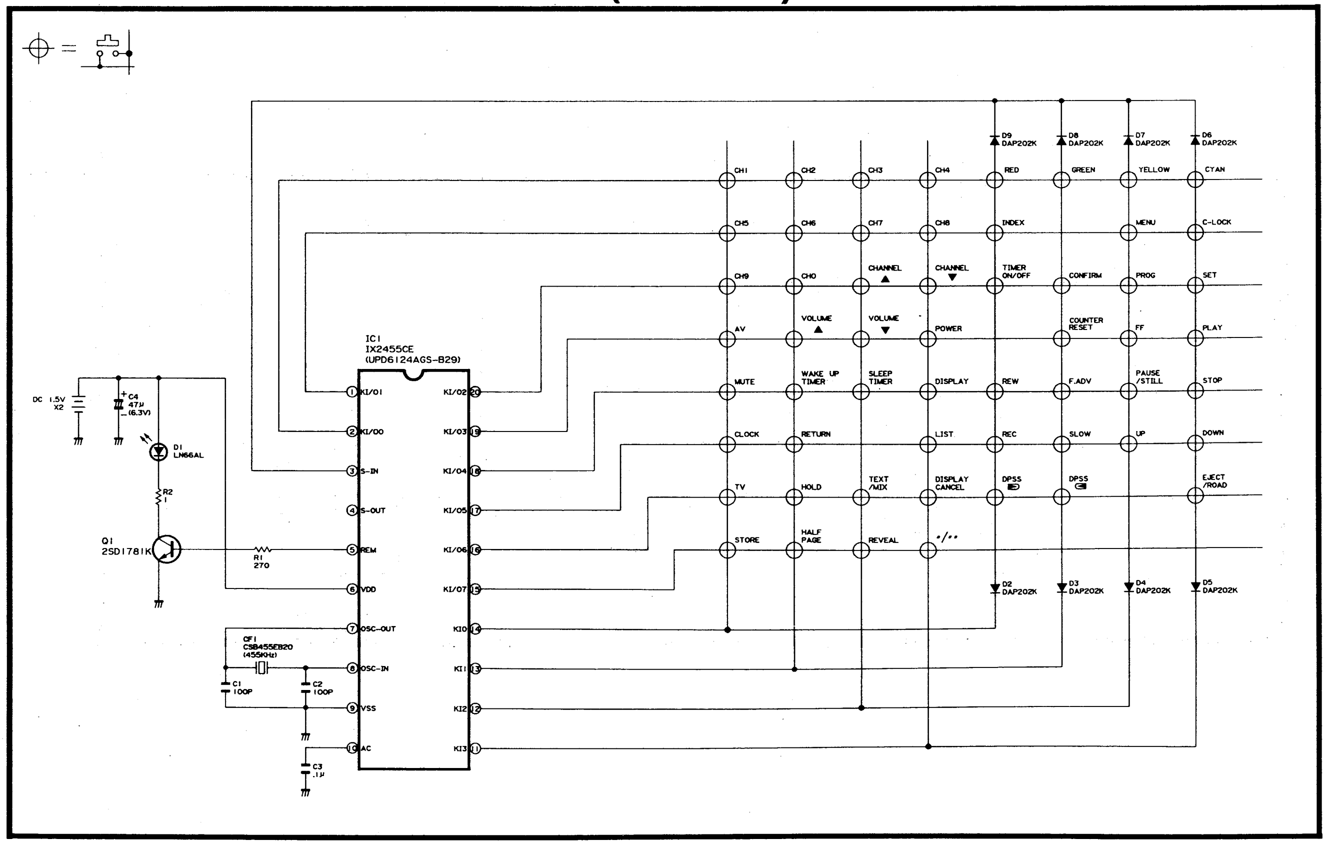
Infrared Remote Control Unit/ INFRAROT-FERNBEDIENUNGSTEL(VT-3700S)

RRMCG1038PESA

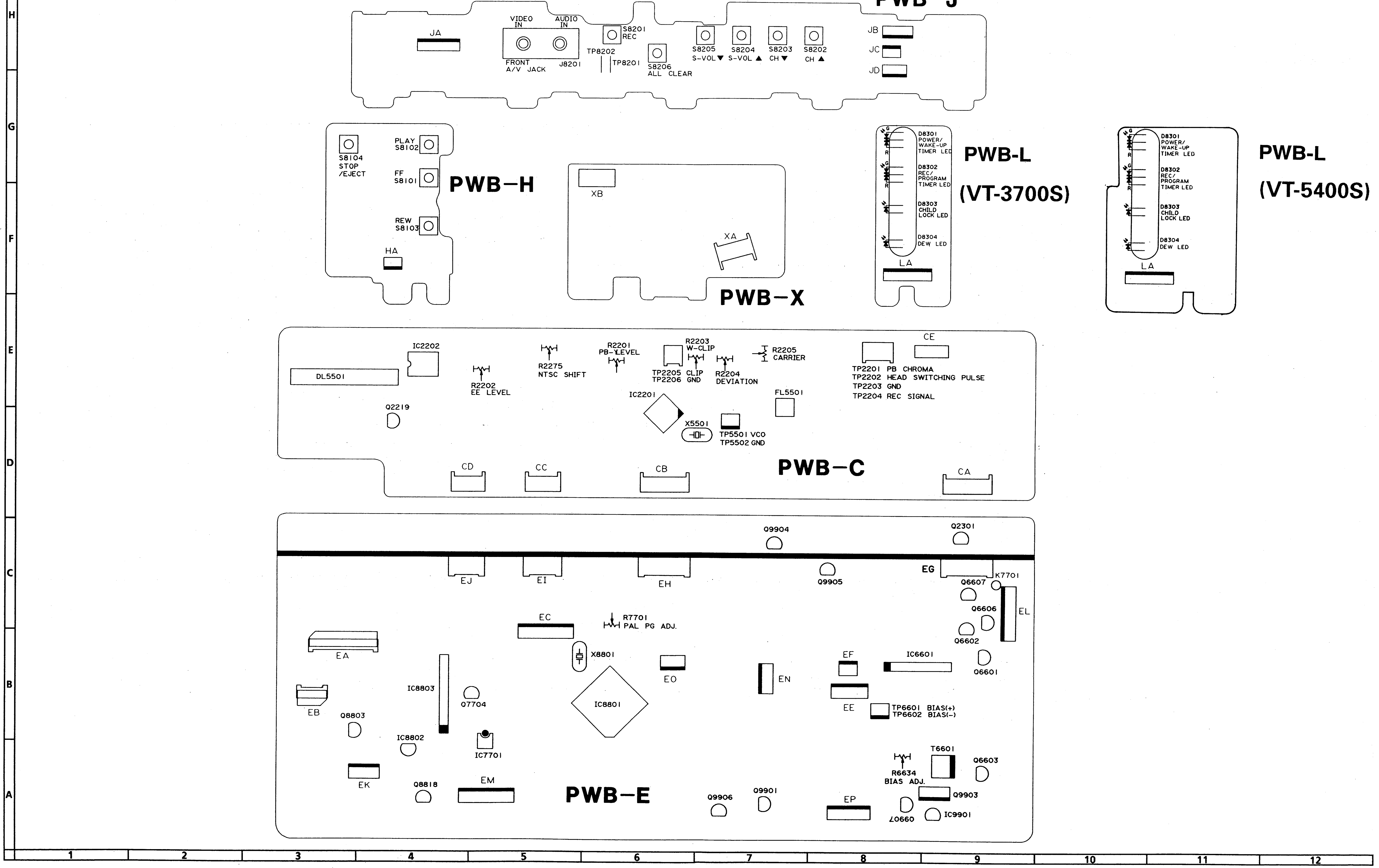

IC1 IX2473CE (UPD6600AGS-E25)
DC 1.5V X2
D1 LN66AL
Q1 2SD1781K
CF1 CSB455E20 (455KHz)
CH1
CH2
CH3
CH4
C-LOCK
TIMER ON/OFF
CONFIRM
PROG
CH5
CH6
CH7
CH8
SET
COUNTER RESET
FF
CH9
CH0
CHANNEL ▲
PLAY
REW
PAUSE /STILL
STOP
CHANNEL ▼
AV
VOLUME ▲
VOLUME ▼
REC
DPSS
EJECT /ROAD
POWER
MUTE
WAKE UP TIMER
SLEEP TIMER
UP
DOWN
F.ADV
SLOW
DISPLAY
-/--
RETURN
MENU
D2 DAP202K
D3 DAP202K
D4 DAP202K
D5 DAP202K
D6 DAP202K
D7 DAP202K
D8 DAP202K
D9 DAP202K

Infrared Remote Control Unit/ INFRAROT-FERNBEDIENUNGSTEL(VT-5400S)

RRMCG1096PESA

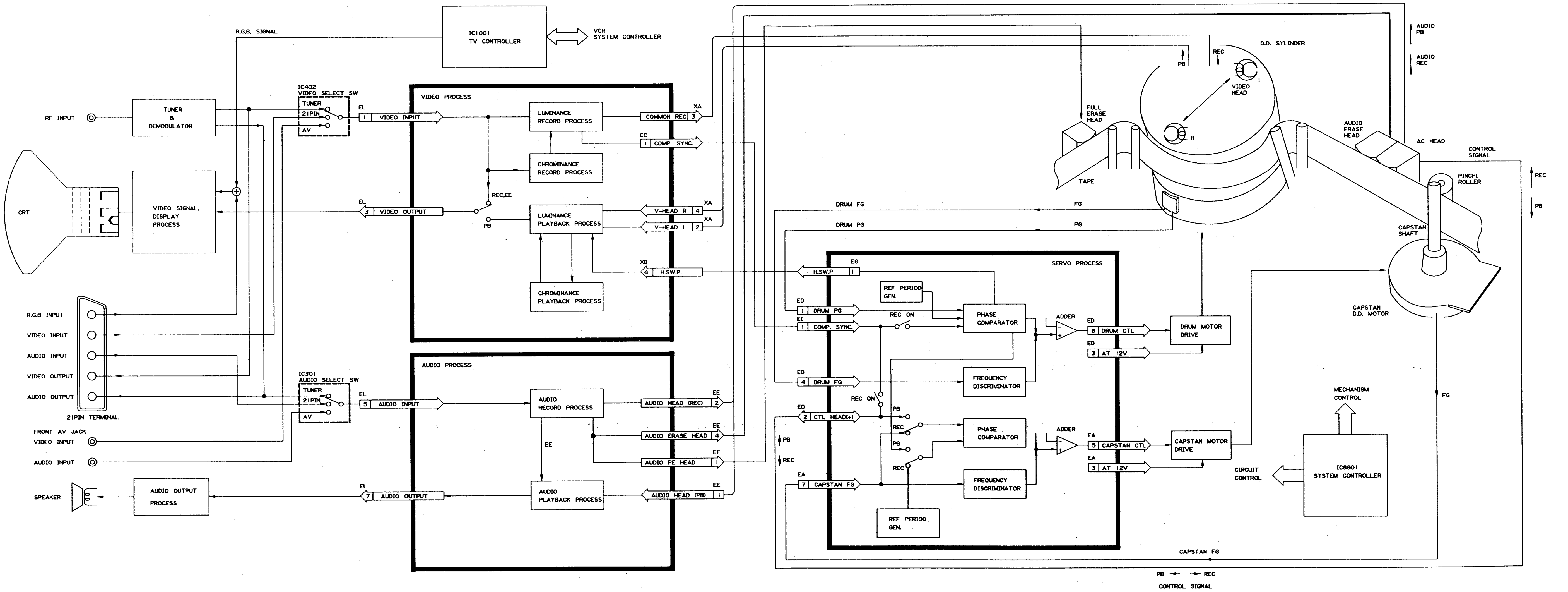

IC1 IX2455CE (UPD6124AGS-B29)
DC 1.5V X2
D1 LN66AL
Q1 2SD1781K
CF1 CSB455E20 (455KHz)
CH1
CH2
CH3
CH4
RED
GREEN
YELLOW
CYAN
CH5
CH6
CH7
CH8
INDEX
MENU
C-LOCK
CH9
CH0
CHANNEL ▲
CHANNEL ▼
TIMER ON/OFF
CONFIRM
PROG
SET
AV
VOLUME ▲
VOLUME ▼
POWER
COUNTER RESET
FF
PLAY
MUTE
WAKE UP TIMER
SLEEP TIMER
DISPLAY
REW
F.ADV
PAUSE /STILL
STOP
CLOCK
RETURN
LIST
REC
SLOW
UP
DOWN
TV
HOLD
TEXT /MIX
DISPLAY CANCEL
DPSS
EJECT /ROAD
STORE
HALF PAGE
REVEAL
-/--
D2 DAP202K
D3 DAP202K
D4 DAP202K
D5 DAP202K
D6 DAP202K
D7 DAP202K
D8 DAP202K
D9 DAP202K

CHASSIS LAYOUT OF VCR SECTION/ CHASSIS-ANORDNUNG DES VIDEORECORDER-TEILS


PWB–J
JA
VIDEO IN
AUDIO IN
FRONT A/V JACK
J8201
S8201 REC
TP8202
TP8201
S8206 ALL CLEAR
S8205 S-VOL ▼
S8204 S-VOL ▲
S8203 CH ▼
S8202 CH ▲
JB
JC
JD
PWB–H
S8104 STOP /EJECT
PLAY S8102
FF S8101
REW S8103
HA
PWB–X
XB
XA
PWB-L
(VT-3700S)
PWB-L
(VT-5400S)
D8301 POWER/ WAKE-UP TIMER LED
D8302 REC/ PROGRAM TIMER LED
D8303 CHILD LOCK LED
D8304 DEW LED
LA
PWB–C
IC2202
DL5501
R2202 EE LEVEL
R2275 NTSC SHIFT
R2201 PB-LEVEL
R2203 W-CLIP
TP2205 CLIP
TP2206 GND
R2204 DEVIATION
R2205 CARRIER
CE
TP2201 PB CHROMA
TP2202 HEAD SWITCHING PULSE
TP2203 GND
TP2204 REC SIGNAL
Q2219
IC2201
X5501
TP5501 VCO
TP5502 GND
FL5501
CD
CC
CB
CA
PWB–E
Q9904
Q2301
EJ
EI
EH
Q9905
EG
K7701
Q6607
Q6606
EL
Q6602
EC
R7701 PAL PG ADJ.
X8801
EA
EO
EN
EF
IC6601
Q6601
EB
IC8803
Q7704
IC8801
EE
TP6601 BIAS(+)
TP6602 BIAS(–)
Q8803
IC8802
IC7701
T6601
R6634 BIAS ADJ.
Q6603
EK
Q8818
EM
Q9906
Q9901
EP
Q9903
Q9907
IC9901
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

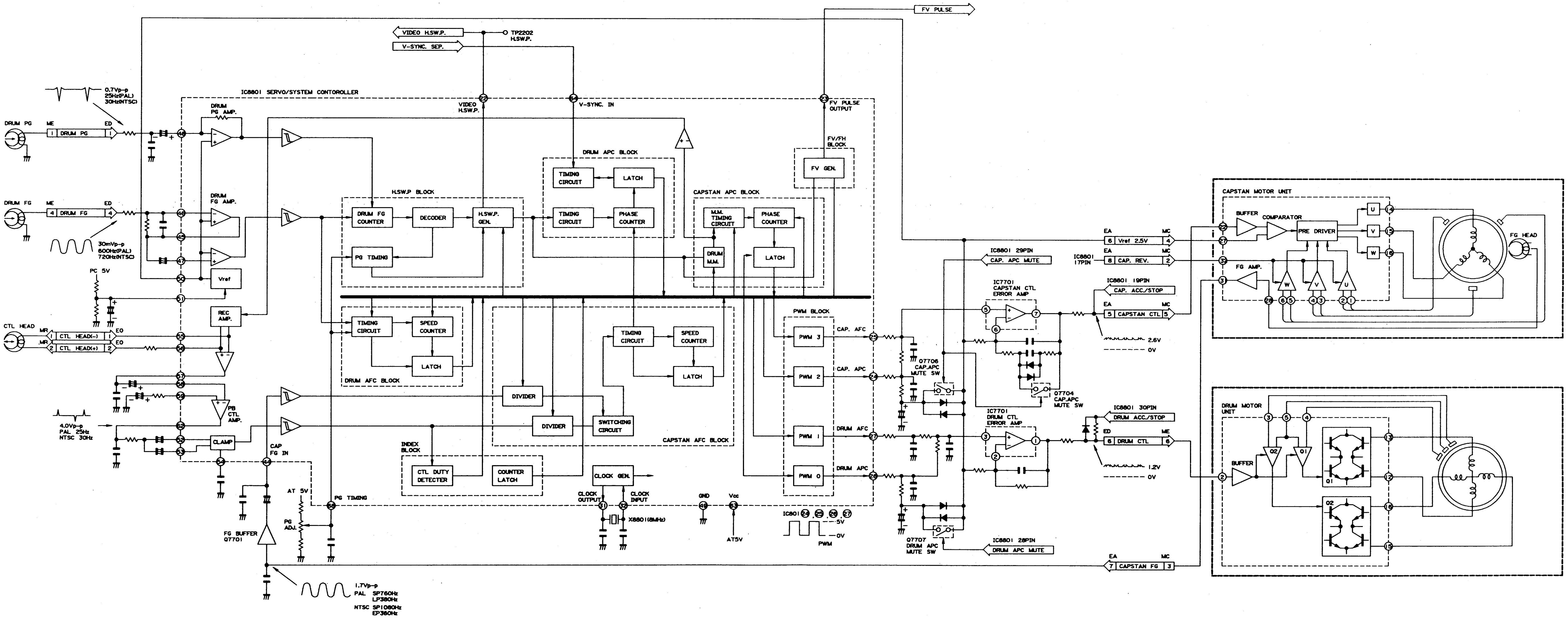
BLOCK DIAGRAM OF VCR SECTION/ BLOCKSCHALTBILD DES VIDEORECORDER-TEILS

■ OVERALL BLOCK DIAGRAM / GESAMT-BLOCKSCHALTBILD


R.G.B. SIGNAL
IC1001 TV CONTROLLER
VCR SYSTEM CONTROLLER
RF INPUT
TUNER & DEMODULATOR
CRT
VIDEO SIGNAL, DISPLAY PROCESS
IC402 VIDEO SELECT SW
TUNER
21PIN
AV
EL
1 VIDEO INPUT
3 VIDEO OUTPUT
VIDEO PROCESS
LUMINANCE RECORD PROCESS
CHROMINANCE RECORD PROCESS
REC,EE
PB
LUMINANCE PLAYBACK PROCESS
CHROMINANCE PLAYBACK PROCESS
XA
COMMON REC 3
CC
1 COMP. SYNC.
V-HEAD R 4
V-HEAD L 2
XB
4 H.SW.P.
R.G.B INPUT
VIDEO INPUT
AUDIO INPUT
VIDEO OUTPUT
AUDIO OUTPUT
21PIN TERMINAL
IC301 AUDIO SELECT SW
5 AUDIO INPUT
7 AUDIO OUTPUT
FRONT AV JACK
VIDEO INPUT
AUDIO INPUT
SPEAKER
AUDIO OUTPUT PROCESS
AUDIO PROCESS
AUDIO RECORD PROCESS
EE
AUDIO PLAYBACK PROCESS
AUDIO HEAD (REC) 2
AUDIO ERASE HEAD 4
EF
AUDIO FE HEAD 1
AUDIO HEAD (PB) 1
D.D. SYLINDER
PB
REC
VIDEO HEAD
L
R
FULL ERASE HEAD
TAPE
AUDIO PB
AUDIO REC
AUDIO ERASE HEAD
AC HEAD
CONTROL SIGNAL
PINCHI ROLLER
CAPSTAN SHAFT
CAPSTAN D.D. MOTOR
DRUM FG
FG
DRUM PG
PG
SERVO PROCESS
EG
H.SW.P 1
REF PERIOD GEN.
ED
1 DRUM PG
EI
1 COMP. SYNC.
REC ON
PHASE COMPARATOR
ADDER
6 DRUM CTL
3 AT 12V
DRUM MOTOR DRIVE
4 DRUM FG
FREQUENCY DISCRIMINATOR
EO
2 CTL HEAD(+)
EA
7 CAPSTAN FG
5 CAPSTAN CTL
CAPSTAN MOTOR DRIVE
MECHANISM CONTROL
IC8801 SYSTEM CONTROLLER
CIRCUIT CONTROL
CAPSTAN FG
PB ← → REC
CONTROL SIGNAL

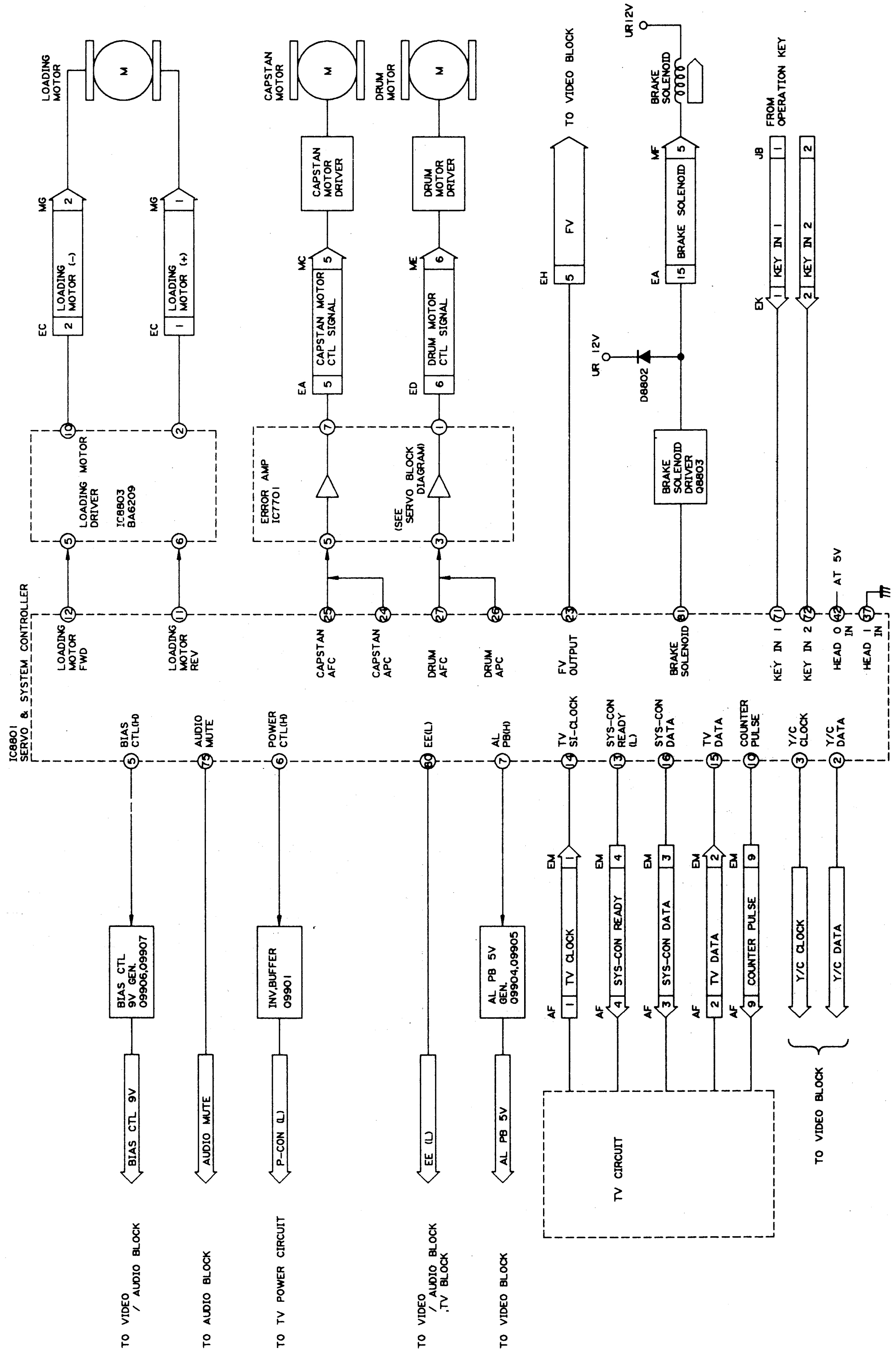
BLOCK DIAGRAM OF VCR SECTION/ BLOCKSCHALTBILD DES VIDEORECORDER-TEILS

■ SERVO PROCESS BLOCK DIAGRAM / SERVOPROZESS-BLOCKSCHALTBILD

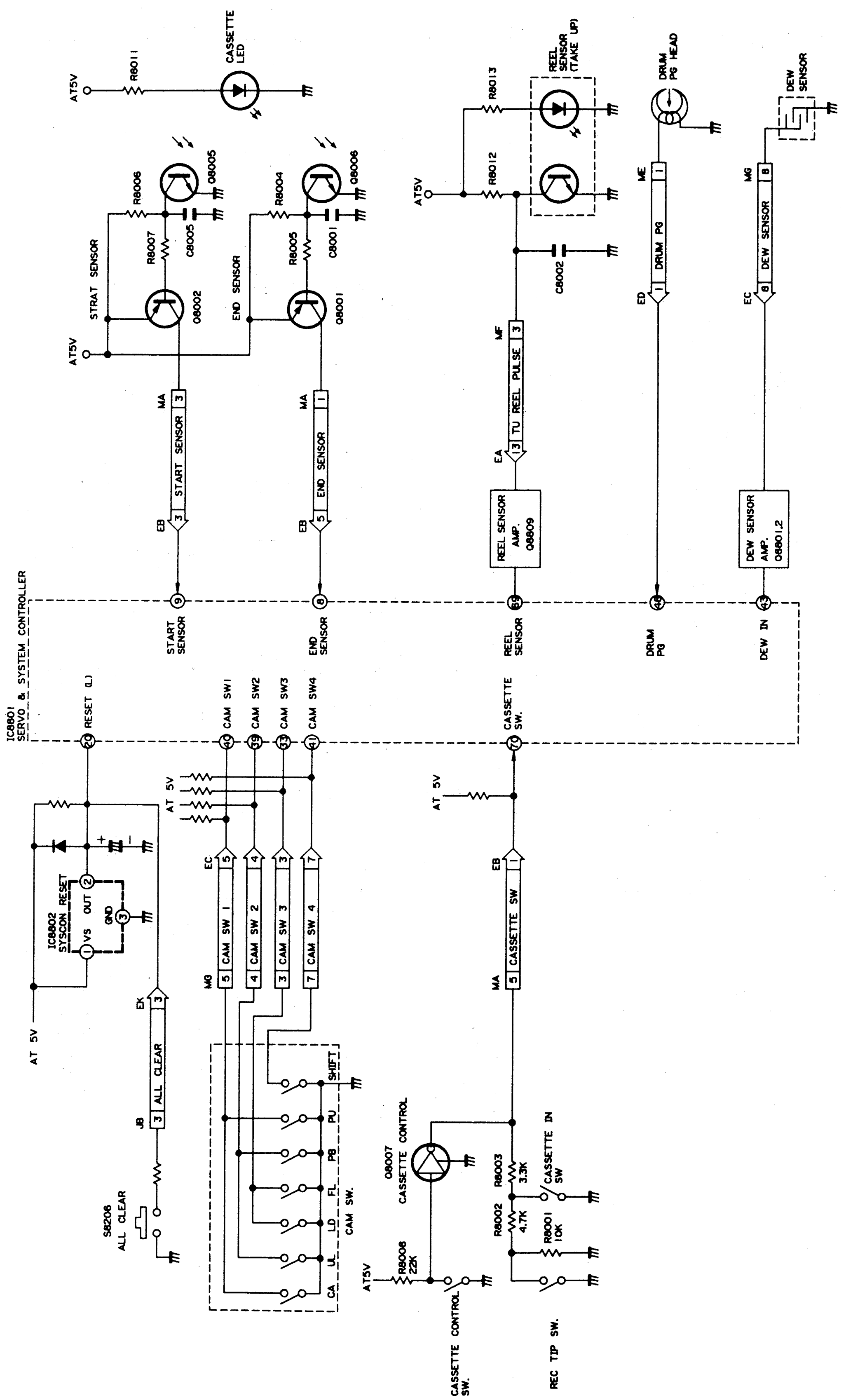

DRUM PG
ME
1 DRUM PG 1
ED
0.7Vp-p
25Hz(PAL)
30Hz(NTSC)
DRUM FG
4 DRUM FG 4
30mVp-p
600Hz(PAL)
720Hz(NTSC)
PC 5V
CTL HEAD
MR
1 CTL HEAD(-) 1
2 CTL HEAD(+) 2
EO
4.0Vp-p
PAL 25Hz
NTSC 30Hz
IC8801 SERVO/SYSTEM CONTOROLLER
DRUM PG AMP.
DRUM FG AMP.
Vref
REC AMP.
PB CTL AMP.
CLAMP
CAP FG IN
FG BUFFER Q7701
AT 5V
PG ADJ.
PG TIMING
1.7Vp-p
PAL SP760Hz
LP380Hz
NTSC SP1080Hz
EP380Hz
VIDEO H.SW.P.
V-SYNC. SEP.
TP2202 H.SW.P.
VIDEO H.SW.P.
V-SYNC. IN
FV PULSE OUTPUT
FV PULSE
H.SW.P BLOCK
DRUM FG COUNTER
DECODER
H.SW.P. GEN.
PG TIMING
DRUM APC BLOCK
TIMING CIRCUIT
LATCH
PHASE COUNTER
CAPSTAN APC BLOCK
M.M. TIMING CIRCUIT
DRUM M.M.
FV/FH BLOCK
FV GEN.
DRUM AFC BLOCK
SPEED COUNTER
DIVIDER
SWITCHING CIRCUIT
CAPSTAN AFC BLOCK
INDEX BLOCK
CTL DUTY DETECTER
COUNTER LATCH
CLOCK GEN.
CLOCK OUTPUT
CLOCK INPUT
X8801(8MHz)
GND
Vcc
AT5V
PWM BLOCK
PWM 3
PWM 2
PWM 1
PWM 0
CAP. AFC
CAP. APC
DRUM AFC
DRUM APC
IC801 24 25 26 27
5V
0V
PWM
Q7706 CAP.APC MUTE SW
Q7704 CAP.APC MUTE SW
Q7707 DRUM APC MUTE SW
IC7701 CAPSTAN CTL ERROR AMP
IC7701 DRUM CTL ERROR AMP
IC8801 29PIN
CAP. APC MUTE
IC8801 17PIN
IC8801 19PIN
CAP. ACC./STOP
IC8801 30PIN
DRUM ACC./STOP
IC8801 28PIN
DRUM APC MUTE
EA
MC
6 Vref 2.5V 4
8 CAP. REV. 2
5 CAPSTAN CTL 5
7 CAPSTAN FG 3
ED
ME
6 DRUM CTL 6
2.6V
1.2V
0V
CAPSTAN MOTOR UNIT
BUFFER
COMPARATOR
PRE DRIVER
FG AMP.
U
V
W
FG HEAD
DRUM MOTOR UNIT
Q1
Q2

BLOCK DIAGRAM OF VCR SECTION/ BLOCKSCHALTBILD DES VIDEORECORDER-TEILS

■ SYSTEM CONTROL BLOCK DIAGRAM / BLOCKSCHALTBILD DER SYSTEM-STEUERUNG

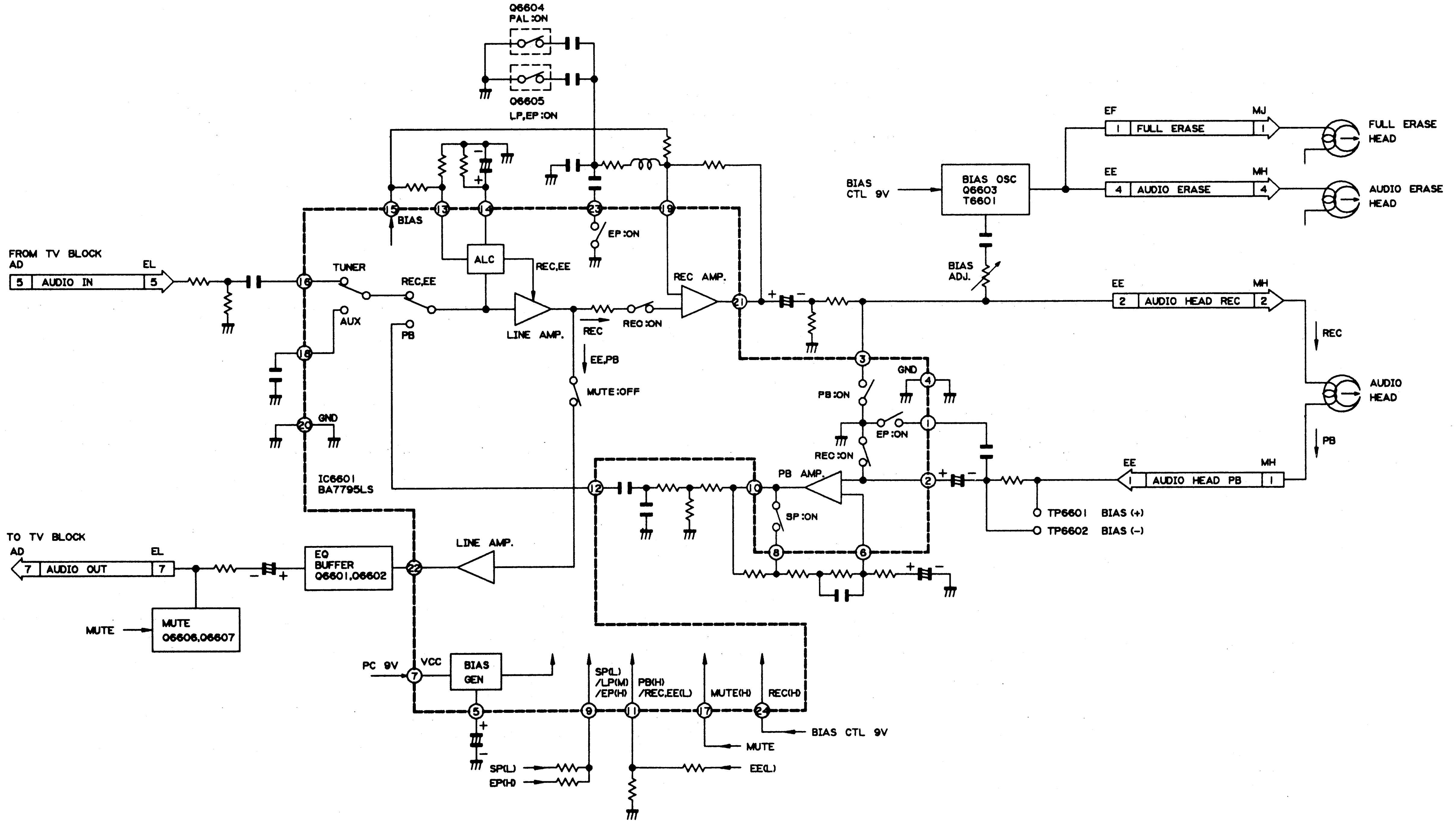

LOADING MOTOR
CAPSTAN MOTOR
DRUM MOTOR
TO VIDEO BLOCK
UR12V
BRAKE SOLENOID
FROM OPERATION KEY
CAPSTAN MOTOR DRIVER
DRUM MOTOR DRIVER
MG
MC
ME
EH
MF
JB
EC
EA
ED
EK
LOADING MOTOR (-)
LOADING MOTOR (+)
CAPSTAN MOTOR CTL SIGNAL
DRUM MOTOR CTL SIGNAL
FV
BRAKE SOLENOID
KEY IN 1
KEY IN 2
UR 12V
D8802
LOADING MOTOR DRIVER IC8803 BA6209
ERROR AMP IC7701
(SEE SERVO BLOCK DIAGRAM)
BRAKE SOLENOID DRIVER Q8803
AT 5V
IC8801 SERVO & SYSTEM CONTROLLER
LOADING MOTOR FWD
LOADING MOTOR REV
CAPSTAN AFC
CAPSTAN APC
DRUM AFC
DRUM APC
FV OUTPUT
BRAKE SOLENOID
KEY IN 1
KEY IN 2
HEAD 0 IN
HEAD 1 IN
BIAS CTL(H)
AUDIO MUTE
POWER CTL(H)
EE(L)
AL PB(H)
TV SI-CLOCK
SYS-CON READY (L)
SYS-CON DATA
TV DATA
COUNTER PULSE
Y/C CLOCK
Y/C DATA
EM
AF
TV CLOCK
SYS-CON READY
SYS-CON DATA
TV DATA
COUNTER PULSE
Y/C CLOCK
Y/C DATA
BIAS CTL 9V GEN. Q9906,Q9907
INV.BUFFER Q9901
AL PB 5V GEN. Q9904,Q9905
TV CIRCUIT
TO VIDEO BLOCK
BIAS CTL 9V
AUDIO MUTE
P-CON (L)
EE (L)
AL PB 5V
TO VIDEO / AUDIO BLOCK
TO AUDIO BLOCK
TO TV POWER CIRCUIT
TO VIDEO / AUDIO BLOCK ,TV BLOCK
TO VIDEO BLOCK

■ SAFETY DEVICE BLOCK DIAGRAM / BLOCKSCHALTBILD DER SCHUTZVORRICHTUNG


AT5V
R8011
CASSETTE LED
R8013
REEL SENSOR (TAKE UP)
DRUM PG HEAD
DEW SENSOR
R8006
Q8005
R8004
Q8006
R8012
R8007
C8005
R8005
C8001
C8002
STRAT SENSOR
END SENSOR
Q8002
Q8001
MA
MF
ME
MG
EB
EA
ED
EC
START SENSOR
END SENSOR
TU REEL PULSE
DRUM PG
DEW SENSOR
REEL SENSOR AMP. Q8809
DEW SENSOR AMP. Q8801,2
IC8801 SERVO & SYSTEM CONTROLLER
START SENSOR
END SENSOR
REEL SENSOR
DRUM PG
DEW IN
RESET (L)
CAM SW1
CAM SW2
CAM SW3
CAM SW4
CASSETTE SW.
AT 5V
IC8802 SYSCON RESET
VS
OUT
GND
EK
JB
ALL CLEAR
S8206 ALL CLEAR
CAM SW 1
CAM SW 2
CAM SW 3
CAM SW 4
CASSETTE SW
SHIFT
PU
PB
FL
UL
LD
CA
CAM SW.
Q8007 CASSETTE CONTROL
R8008 22K
R8003 3.3K
R8002 4.7K
R8001 10K
CASSETTE IN SW
CASSETTE CONTROL SW.
REC TIP SW.

BLOCK DIAGRAM OF VCR SECTION/ BLOCKSCHALTBILD DES VIDEORECORDER-TEILS

■ AUDIO BLOCK DIAGRAM / BLOCKSCHALTBILD DER AUDIOSTUFE


Q6604
PAL :ON
Q6605
LP,EP :ON
BIAS
EP :ON
FROM TV BLOCK
AD
EL
5
AUDIO IN
5
TUNER
REC,EE
AUX
PB
ALC
REC,EE
LINE AMP.
REC
REC :ON
EE,PB
MUTE :OFF
REC AMP.
GND
IC6601
BA7795LS
TO TV BLOCK
AD
EL
7
AUDIO OUT
7
EQ
BUFFER
Q6601,Q6602
LINE AMP.
MUTE
MUTE
Q6606,Q6607
PC 9V
VCC
BIAS
GEN
SP(L)
/LP(M)
/EP(H)
PB(H)
/REC,EE(L)
MUTE(H)
REC(H)
BIAS CTL 9V
MUTE
SP(L)
EP(H)
EE(L)
BIAS
CTL 9V
BIAS OSC
Q6603
T6601
BIAS
ADJ.
EF
MJ
1
FULL ERASE
1
FULL ERASE
HEAD
EE
MH
4
AUDIO ERASE
4
AUDIO ERASE
HEAD
EE
MH
2
AUDIO HEAD REC
2
REC
AUDIO
HEAD
PB
EE
MH
1
AUDIO HEAD PB
1
PB :ON
GND
EP :ON
REC :ON
PB AMP.
SP :ON
TP6601 BIAS (+)
TP6602 BIAS (–)

BLOCK DIAGRAM OF VCR SECTION/ BLOCKSCHALTBILD DES VIDEORECORDER-TEILS

⇨ **Playback Chrominance Signal/ Wiedergabe-Chromasignal**

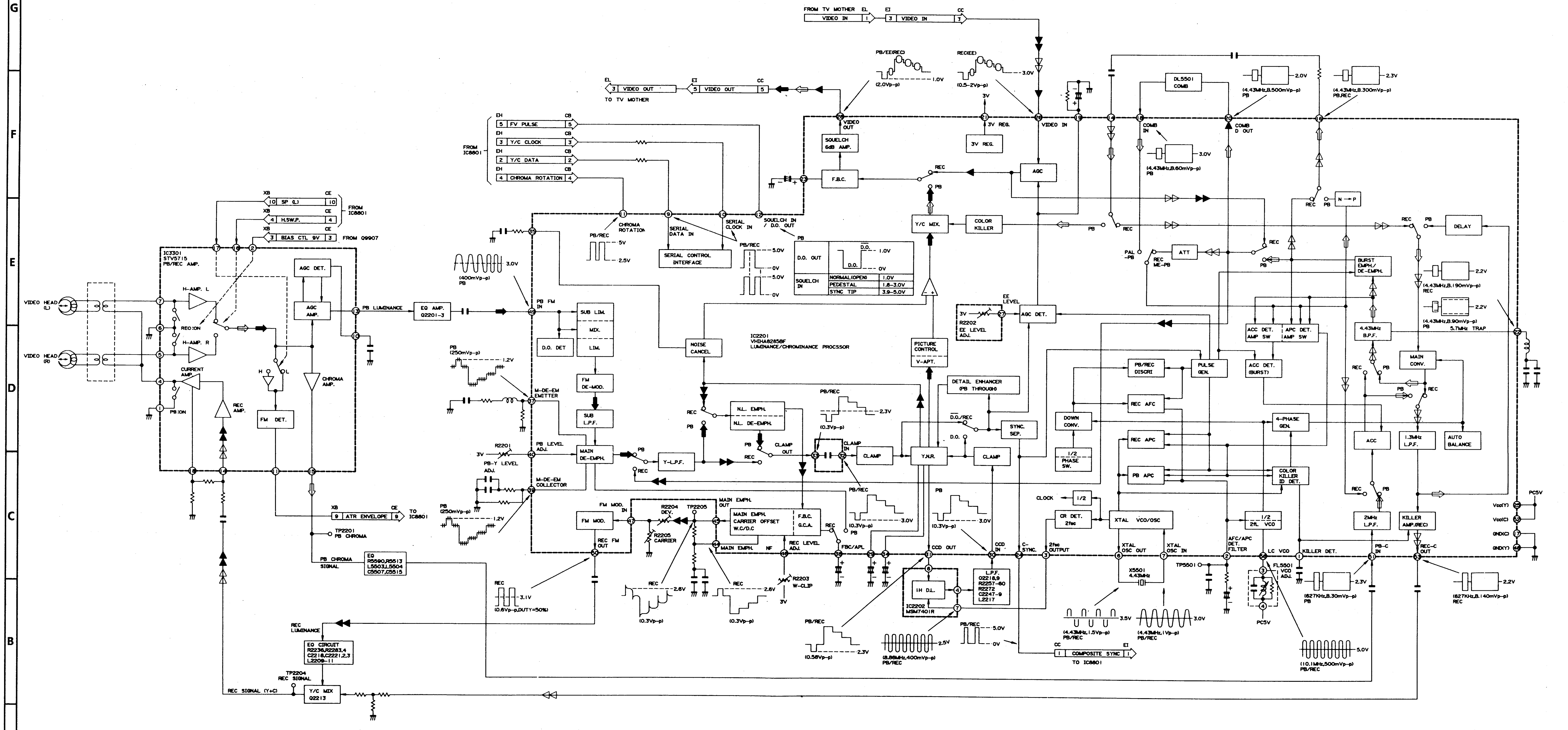
➡ **Playback Luminance Signal/ Wiedergabe-Luminanzsignal**

▷▷ **Recording Chrominance Signal/ Aufnahme-Chromasignal**

▶▶ **Recording Luminance Signal/ Aufnahme-Luminanzsignal**

▶ **E-E Signal/ E-E-Signal**

■ VIDEO SIGNAL FLOW BLOCK DIAGRAM / VIDEOSIGNALFLUSS-BLOCKSCHALTBILD


FROM TV MOTHER
VIDEO IN
TO TV MOTHER
VIDEO OUT
FV PULSE
Y/C CLOCK
Y/C DATA
CHROMA ROTATION
FROM IC8801
SP (L)
H.SW.P.
BIAS CTL 9V
FROM IC8801
FROM Q9907
IC3301
STV5715
PB/REC AMP.
VIDEO HEAD (L)
VIDEO HEAD (R)
H-AMP. L
H-AMP. R
AGC DET.
AGC AMP.
CURRENT AMP
REC AMP.
FM DET.
CHROMA AMP.
PB LUMINANCE
EQ AMP. Q2201-3
ATR ENVELOPE
TO IC8801
TP2201 PB CHROMA
PB CHROMA SIGNAL
EQ R5590,R5513 L5503,L5504 C5507,C5515
REC LUMINANCE
EQ CIRCUIT
TP2204 REC SIGNAL
REC SIGNAL (Y+C)
Y/C MIX Q2213
PB FM IN
SUB LIM.
MIX.
LIM.
D.O. DET
FM DE-MOD.
SUB L.P.F.
M-DE-EM EMITTER
PB LEVEL ADJ.
R2201
PB-Y LEVEL ADJ.
MAIN DE-EMPH.
M-DE-EM COLLECTOR
Y-L.P.F.
FM MOD.
FM MOD. IN
REC FM OUT
R2204 DEV.
TP2205
R2205 CARRIER
MAIN EMPH. OUT
MAIN EMPH. CARRIER OFFSET W.C/D.C
F.B.C.
G.C.A.
REC LEVEL ADJ.
R2203 W-CLIP
CHROMA ROTATION
SERIAL DATA IN
SERIAL CLOCK IN
SERIAL CONTROL INTERFACE
SQUELCH IN / D.O. OUT
D.O. OUT
SQUELCH IN
NORMAL(OPEN)
PEDESTAL
SYNC TIP
NOISE CANCEL
IC2201
VHiHA8285BF
LUMINANCE/CHROMINANCE PROCESSOR
N.L. EMPH.
N.L. DE-EMPH.
CLAMP OUT
CLAMP IN
CLAMP
Y.N.R.
PICTURE CONTROL
V-APT.
DETAIL ENHANCER (PB THROUGH)
SYNC. SEP.
Y/C MIX.
COLOR KILLER
VIDEO OUT
SQUELCH 6dB AMP.
F.B.C.
3V REG.
VIDEO IN
AGC
AGC DET.
EE LEVEL
R2202 EE LEVEL ADJ.
IH D.L.
IC2202 MSM7401R
L.P.F. Q2218,9 R2257-60 R2272 C2247-9 L2217
CCD OUT
CCD IN
C-SYNC.
2fsc OUTPUT
COMPOSITE SYNC
TO IC8801
DL5501 COMB
COMB IN
COMB D OUT
ATT
PAL -PB
N→P
DELAY
BURST EMPH./DE-EMPH.
4.43MHz B.P.F.
MAIN CONV.
ACC DET. AMP SW
APC DET. AMP SW
ACC DET. (BURST)
PB/REC DISCRI
PULSE GEN.
REC AFC
DOWN CONV.
4-PHASE GEN.
REC APC
PB APC
1/2 PHASE SW.
COLOR KILLER ID DET.
CLOCK
1/2
CR DET. 2fsc
XTAL VCO/OSC
1/2 2fL VCO
XTAL OSC OUT
XTAL OSC IN
AFC/APC DET. FILTER
LC VCO
KILLER DET.
X5501 4.43MHz
TP5501
FL5501 VCO ADJ.
ACC
1.3MHz L.P.F.
AUTO BALANCE
2MHz L.P.F.
KILLER AMP.(REC)
PB-C IN
REC-C OUT
PC5V
Vcc(Y)
Vcc(C)
GND(C)
GND(Y)
5.7MHz TRAP
(4.43MHz,B.500mVp-p) PB
(4.43MHz,B.300mVp-p) PB,REC
(4.43MHz,B.60mVp-p) PB
(4.43MHz,B.190mVp-p) REC
(4.43MHz,B.90mVp-p) PB
(627KHz,B.30mVp-p) PB
(627KHz,B.140mVp-p) REC
(10.1MHz,500mVp-p) PB/REC
(8.86MHz,400mVp-p) PB/REC
(4.43MHz,1.5Vp-p) PB/REC
(4.43MHz,1Vp-p) PB/REC
(400mVp-p) PB
(250mVp-p)
(0.6Vp-p,DUTY=50%)
REC
PB
REC ON
PB ON

DESCRIPTION OF VCR SECTION SCHEMATIC DIAGRAM

IMPORTANT SAFETY NOTICE:

BE SURE TO USE GENUINE PARTS FOR SECURING THE SAFETY AND RELIABILITY OF THE SET. PARTS MARKED WITH "⚠" AND PARTS SHADED (IN BLACK) ARE ESPECIALLY IMPORTANT FOR MAINTAINING THE SAFETY AND PROTECTING ABILITY OF THE SET. BE SURE TO REPLACE THEM WITH PARTS OF SPECIFIED PART NUMBER.

SAFETY NOTES:

1. *DISCONNECT THE AC PLUG FROM THE AC OUTLET BEFORE REPLACING PARTS.*
2. *SEMICONDUCTOR HEAT SINKS SHOULD BE REGARDED AS POTENTIAL SHOCK HAZARDS WHEN THE CHASSIS IS OPERATING.*

NOTES:

1. *The unit of resistance "ohm" is omitted (K = 1000 ohm, M = 1 Meg ohm).*
2. *All resistors are 1 / 8 watt, unless otherwise noted.*
3. *The unit of capacitance "F" is omitted (μ = μF, p = μμF).*
4. *The values in parentheses are the ones in the PB mode; the values without parentheses are the ones in the REC mode.*

VOLTAGE MEASUREMENT CONDITIONS:

1. *DC voltages are measured between points indicated and chassis ground by VTVM, with AC220~240V, 50Hz supplied to unit and all controls are set to normal viewing picture unless otherwise noted.*
2. *Voltages are measured with 10000μV B & W or colour signal.*

WAVEFORM MEASUREMENT CONDITIONS:

10000μV 87.5 percent modulated colour bar signal is fed into tuner.

CAUTION:

This circuit diagram is original one. Therefore there may be a slight difference from yours.

BESCHREIBUNG DES SCHEMADIAGRAMMS DES VIDEORECORDER-TEILS

WICHTIGER SICHERHEITSHINWEIS:

IMMER NUR ZUM AUSTAUSCH ORIGINALTEILE VERWENDEN, UM DIE SICHERHEIT UND ZUVERLÄSSIGKEIT DES GERÄTES NICHT ZU GEFÄHRDEN. TEILE, DIE MIT EINEM GEFAHRENSYMBOL "⚠" GEKENNZEICHNET SIND ODER (IN SCHWARZ) SCHRAFFIERT MARKIERTE TEILE SIND FÜR DIE SICHERE FUNKTION DES GERÄTES VON ENTSCHEIDENDER BEDEUTUNG. IMMER DIESE TEILE UNBEDINGT NUR MIT AUSTAUSCHTEILEN DER ANGEGEBENEN TEILENUMMER ERSETZEN.

SICHERHEITSHINWEISE:

1. *VOR DEM AUSTAUSCHEN VON TEILEN IMMER DEN NETZSTECKER VON DER STECKDOSE ABZIEHEN.*
2. *HITZEWANNEN FÜR HALBLEITERELEMENTE STELLEN BEI BETRIEBENEM LAUFWERK EINE GEFAHRENQUELLE FÜR ELEKTRISCHE SCHLÄGE DAR.*

HINWEISE:

1. *Die Einheit füs Widerstand "Ohm" ist bei den Angaben weggelassen worden. (K = 1000 Ohm, M = 1 Mega-Ohm)*
2. *Alle Widerstände sind 1/8 Watt, wenn nicht anders angegeben.*
3. *Die Einheit füs Kapazität "F" ist weggelassen worden. (μ = μF, p = μμF).*
4. *Die in Klammern gegebenen Werte beziehen sich auf Wiedergabe-Betriebsart; die Werte ohne Klammern beziehen sich auf Aufnahme-Betriebsart.*

BEDINGUNGEN ZUR SPANNUNGSMESSUNG:

1. *Gleichspannungen werden zwischen angegebenen Punkten und Cassis-Masse mit VTVM gemessen, bei angelegter Wechselspannung von 220 ~ 240 V, 50 Hz und allen Reglern auf normale Bildbetrachtung gestellt, wenn nicht anders angegeben.*
2. *Spannungen werden mit 10.000 μV Schwarzweiß- oder Farbsignal gemessen.*

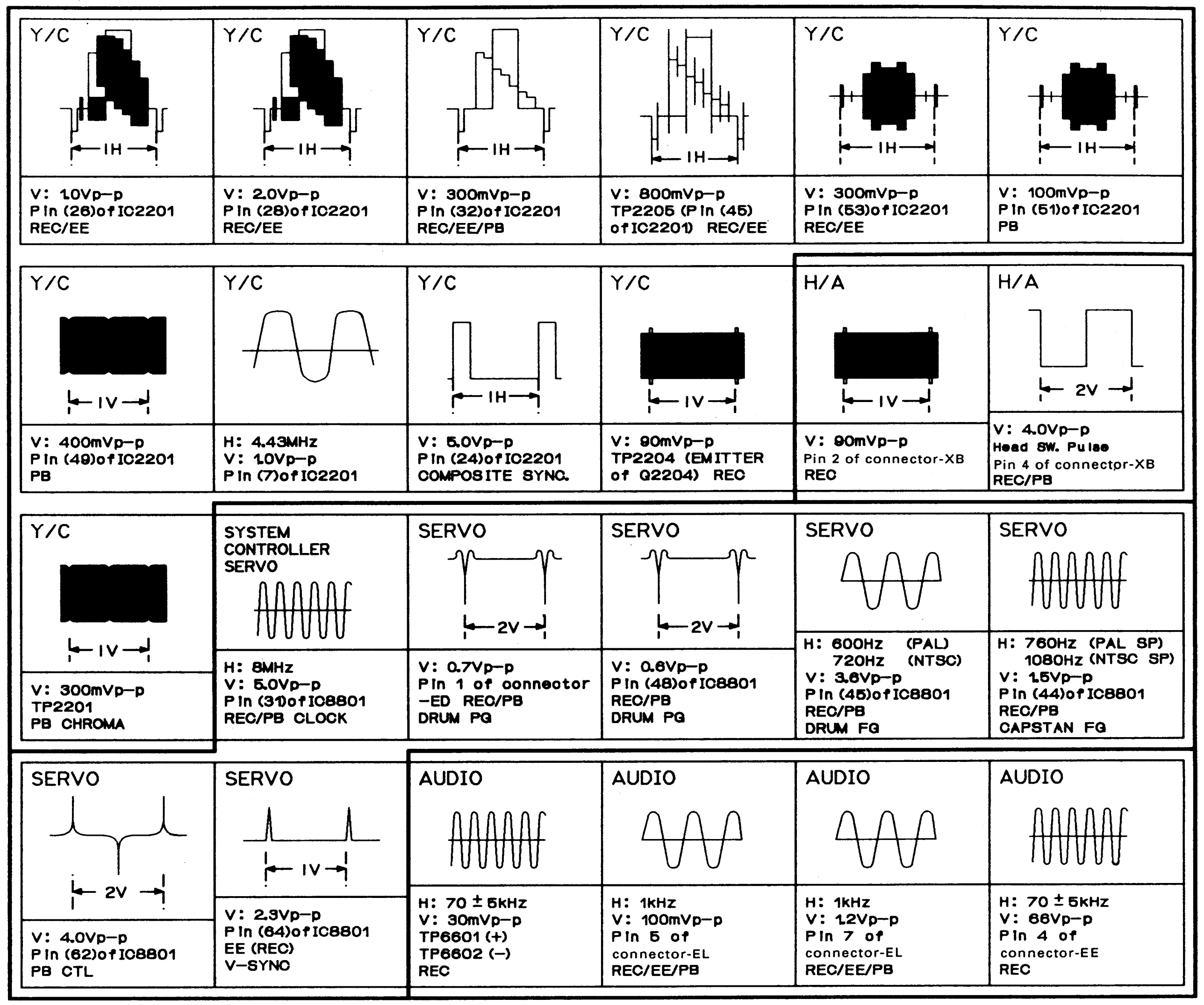
BEDINGUNGEN ZUR H-LKURVEN-MESSUNG:

10.000 μV, 87,5% moduliertes Farbbalken-Signal wird an den Tuner angelegt.

ACHTUNG:

Dieses Schemadiagramm ist neu gezeichnet worden; darum können kleine Unterschiede zu dem bei Ihnen vorhandenen vorliegen.

WAVEFORMS HÜLLKURVEN



Y/C V: 1.0Vp-p Pin (26)of IC2201 REC/EE	Y/C V: 2.0Vp-p Pin (28)of IC2201 REC/EE	Y/C V: 300mVp-p Pin (32)of IC2201 REC/EE/PB	Y/C V: 800mVp-p TP2205 (Pin (45) of IC2201) REC/EE	Y/C V: 300mVp-p Pin (53)of IC2201 REC/EE	Y/C V: 100mVp-p Pin (51)of IC2201 PB
Y/C V: 400mVp-p Pin (49)of IC2201 PB	Y/C H: 4.43MHz V: 1.0Vp-p Pin (7)of IC2201	Y/C V: 5.0Vp-p Pin (24)of IC2201 COMPOSITE SYNC.	Y/C V: 90mVp-p TP2204 (EMITTER of Q2204) REC	H/A V: 90mVp-p Pin 2 of connector-XB REC	H/A V: 4.0Vp-p Head SW. Pulse Pin 4 of connector-XB REC/PB
Y/C V: 300mVp-p TP2201 PB CHROMA	SYSTEM CONTROLLER SERVO H: 8MHz V: 5.0Vp-p Pin (31)of IC8801 REC/PB CLOCK	SERVO V: 0.7Vp-p Pin 1 of connector -ED REC/PB DRUM PG	SERVO V: 0.6Vp-p Pin (48)of IC8801 REC/PB DRUM PG	SERVO H: 600Hz (PAL) 720Hz (NTSC) V: 3.6Vp-p Pin (45)of IC8801 REC/PB DRUM FG	SERVO H: 760Hz (PAL SP) 1080Hz (NTSC SP) V: 1.5Vp-p Pin (44)of IC8801 REC/PB CAPSTAN FG
SERVO V: 4.0Vp-p Pin (62)of IC8801 PB CTL	SERVO V: 2.3Vp-p Pin (64)of IC8801 EE (REC) V-SYNC	AUDIO H: 70 ± 5kHz V: 30mVp-p TP6601 (+) TP6602 (−) REC	AUDIO H: 1kHz V: 100mVp-p Pin 5 of connector-EL REC/EE/PB	AUDIO H: 1kHz V: 1.2Vp-p Pin 7 of connector-EL REC/EE/PB	AUDIO H: 70 ± 5kHz V: 66Vp-p Pin 4 of connector-EE REC

SCHEMATIC DIAGRAM: Y/C Unit/
SCHEMADIAGRAMM: Y/C-Einheit

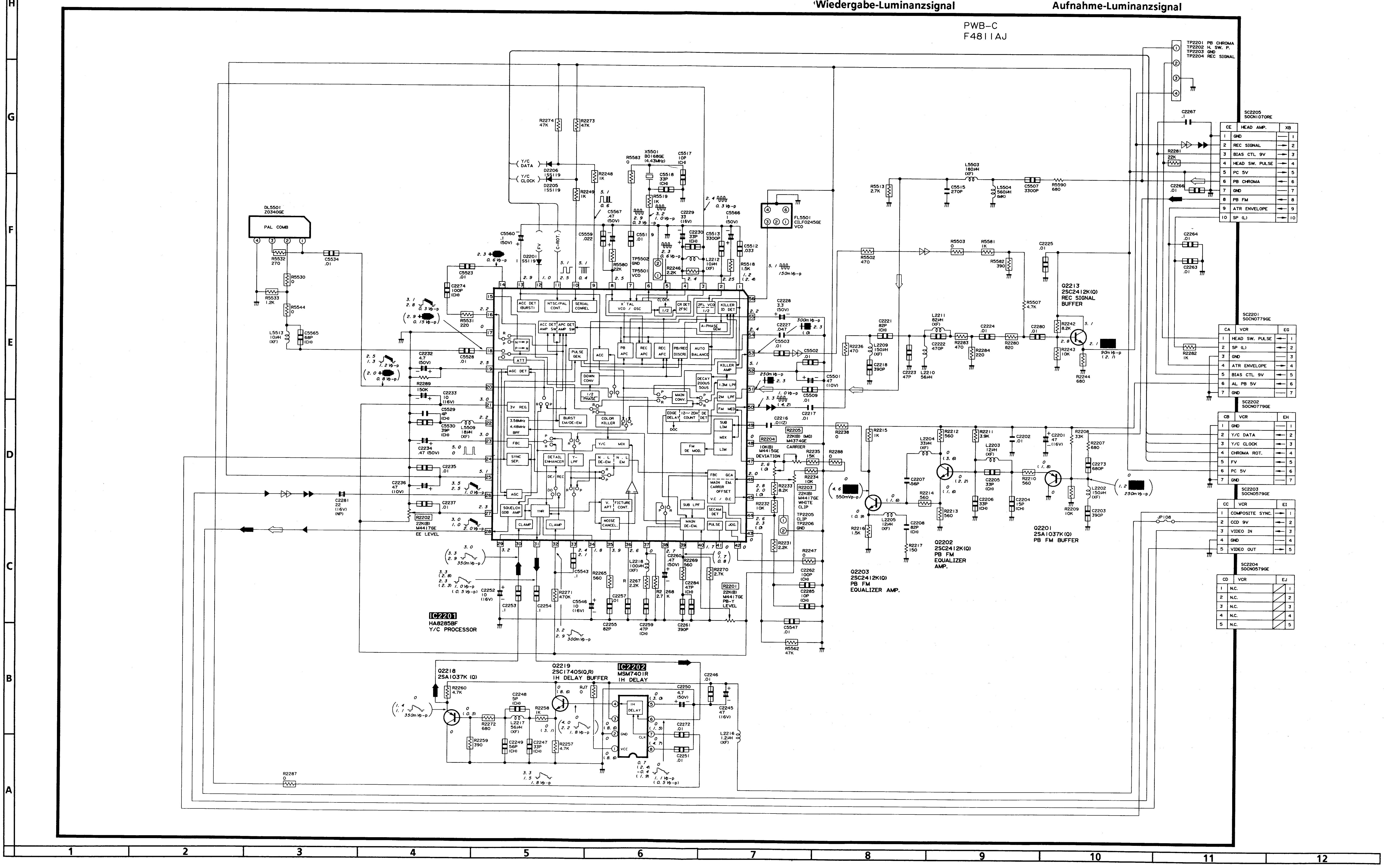
⇨ Playback Chrominance Signal/
Wiedergabe-Chromasignal

➡ Playback Luminance Signal/
'Wiedergabe-Luminanzsignal

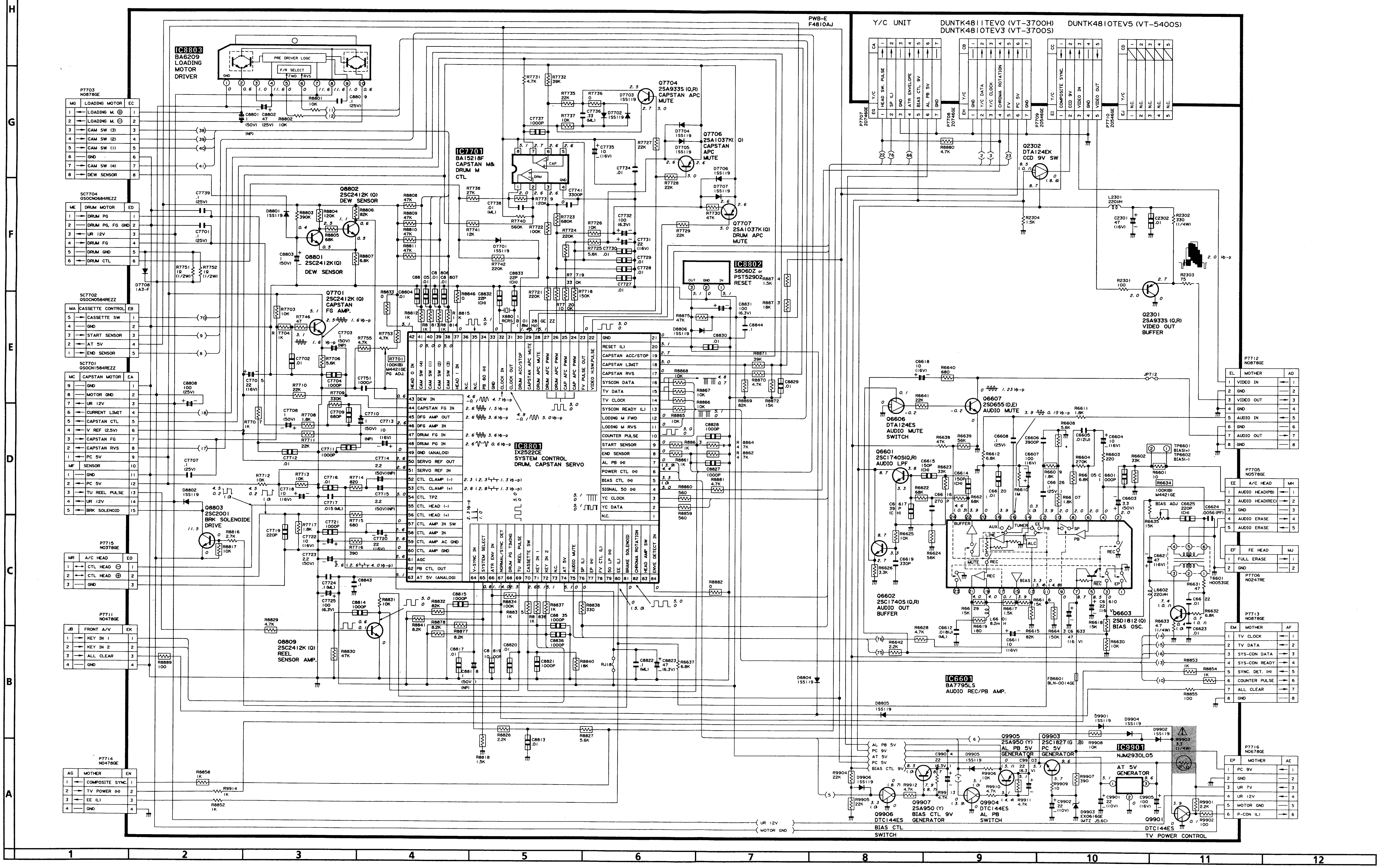
▷▷ Recording Chrominance Signal/
Aufnahme-Chromasignal

▶▶ Recording Luminance Signal/
Aufnahme-Luminanzsignal

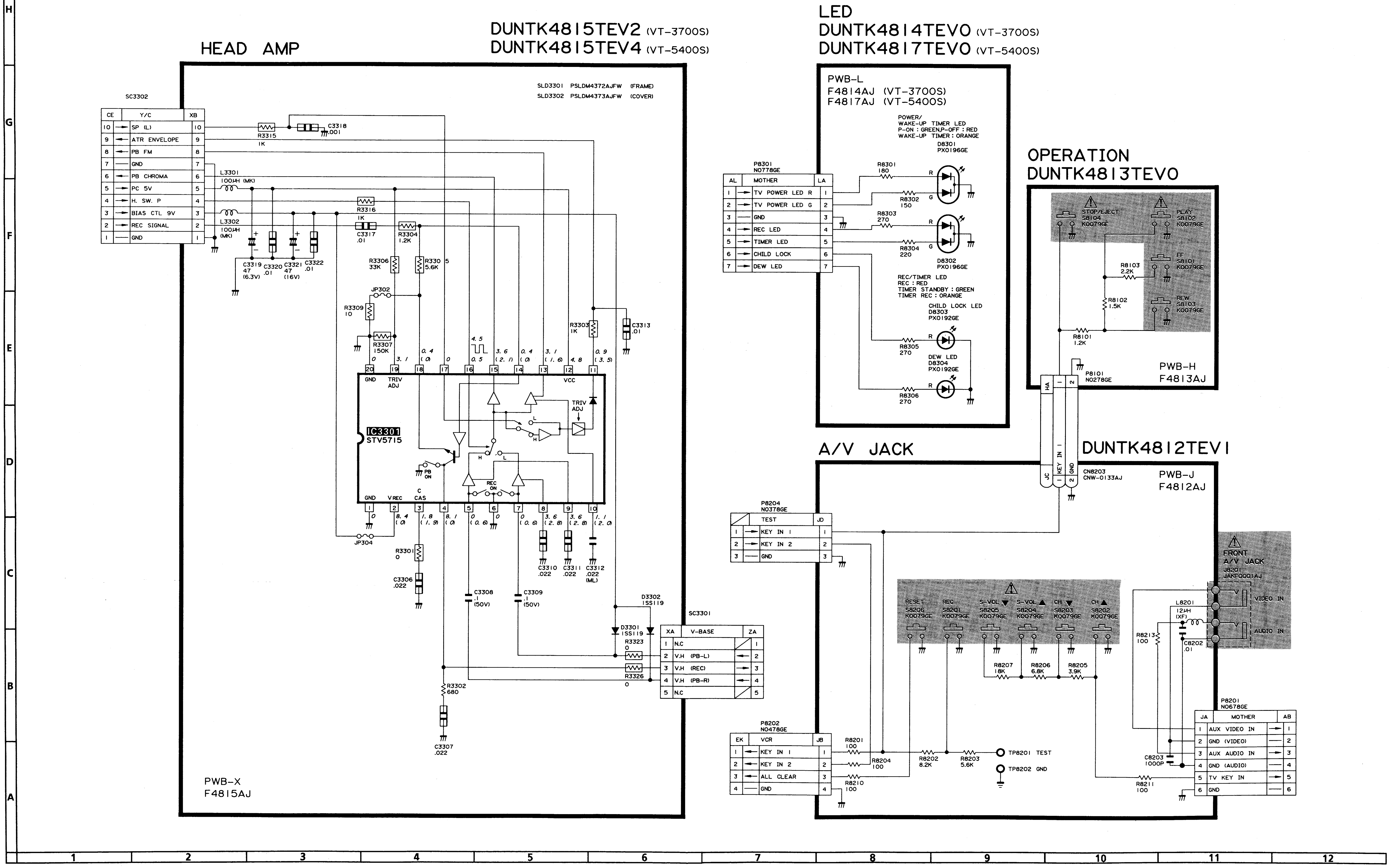
▸ E-E Signal/
E-E-Signal


PWB-C
F4811AJ
TP2201 PB CHROMA
TP2202 H. SW. P.
TP2203 GND
TP2204 REC SIGNAL
SC2205
SOCN1070RE
CE HEAD AMP. XB
GND
REC SIGNAL
BIAS CTL 9V
HEAD SW. PULSE
PC 5V
PB CHROMA
GND
PB FM
ATR ENVELOPE
SP (L)
SC2201
SOCN0779GE
CA VCR EG
HEAD SW. PULSE
SP (L)
GND
ATR ENVELOPE
BIAS CTL 9V
AL PB 5V
GND
SC2202
SOCN0779GE
CB VCR EH
GND
Y/C DATA
Y/C CLOCK
CHROMA ROT.
FV
PC 5V
GND
SC2203
SOCN0579GE
CC VCR EI
COMPOSITE SYNC.
CCD 9V
VIDEO IN
GND
VIDEO OUT
SC2204
SOCN0579GE
CD VCR EJ
N.C.
N.C.
N.C.
N.C.
N.C.
DL5501
Z0340GE
PAL COMB
X5501
B0168GE
(4.43MHz)
FL5501
CILF0245GE
VCO
Y/C DATA
Y/C CLOCK
IC2201
HA8285BF
Y/C PROCESSOR
Q2213
2SC2412K(Q)
REC SIGNAL BUFFER
Q2201
2SA1037K(Q)
PB FM BUFFER
Q2202
2SC2412K(Q)
PB FM EQUALIZER AMP.
Q2203
2SC2412K(Q)
PB FM EQUALIZER AMP.
Q2218
2SA1037K (Q)
Q2219
2SC1740S(Q,R)
1H DELAY BUFFER
IC2202
MSM7401R
1H DELAY
R2202
22K(B)
M4417GE
EE LEVEL
R2201
22K(B)
M4417GE
PB-Y LEVEL
R2203
22K(B)
M4417GE
WHITE CLIP
R2204
10K(B)
M4415GE
CARRIER DEVIATION
R2205
22K(B) (MG)
M4417GE
CARRIER
TP2205
CLIP
TP2206
GND
JP108
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

SCHEMATIC DIAGRAM: VCR Main Unit/
SCHEMADIAGRAMM: VIDEORECORDER-Hauptgerät

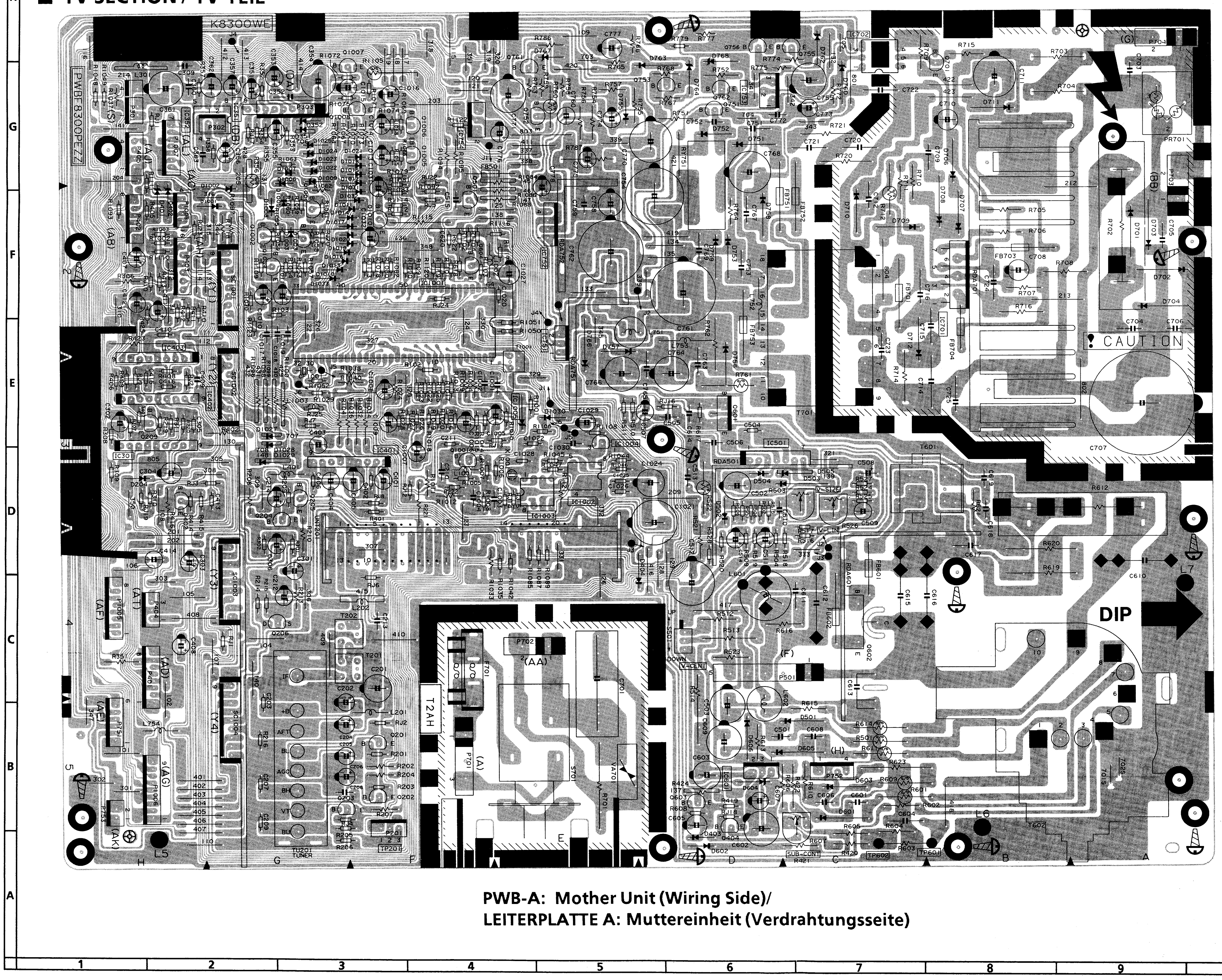

H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12
PWB-E
F4810AJ
Y/C UNIT
DUNTK4811TEV0 (VT-3700H)
DUNTK4810TEV3 (VT-3700S)
DUNTK4810TEV5 (VT-5400S)
IC8803
BA6209
LOADING
MOTOR
DRIVER
PRE DRIVER LOGIC
F/R SELECT
IC7701
BA15218F
CAPSTAN M&
DRUM M
CTL
IC8801
IX2522CE
SYSTEM CONTROL
DRUM, CAPSTAN SERVO
IC8802
S806DZ or
PST52902
RESET
IC6601
BA7795LS
AUDIO REC/PB AMP.
IC9901
NJM2930L05
AT 5V
GENERATOR
Q8802
2SC2412K (Q)
DEW SENSOR
Q8801
2SC2412K(Q)
DEW SENSOR
Q7701
2SC2412K (Q)
CAPSTAN
FG AMP.
Q7704
2SA933S (Q,R)
CAPSTAN APC
MUTE
Q7706
2SA1037K(Q)
CAPSTAN
APC
MUTE
Q7707
2SA1037K(Q)
DRUM APC
MUTE
Q8803
2SC2001
BRK SOLENOIDE
DRIVE
Q8809
2SC2412K (Q)
REEL
SENSOR AMP.
Q2302
DTA124EK
CCD 9V SW
Q2301
2SA933S (Q,R)
VIDEO OUT
BUFFER
Q6606
DTA124ES
AUDIO MUTE
SWITCH
Q6607
2SD655 (D,E)
AUDIO MUTE
Q6601
2SC1740S(Q,R)
AUDIO LPF
Q6602
2SC1740S (Q,R)
AUDIO OUT
BUFFER
Q6603
2SD1812(Q)
BIAS OSC.
Q9905
2SA950 (Y)
AL PB 5V
GENERATOR
Q9903
2SC1827 (G,B)
PC 5V
GENERATOR
Q9906
DTC144ES
BIAS CTL
SWITCH
Q9907
2SA950 (Y)
BIAS CTL 9V
GENERATOR
Q9904
DTC144ES
AL PB
SWITCH
Q9901
DTC144ES
TV POWER CONTROL
P7703
N0878GE
MG LOADING MOTOR EC
LOADING M. ⊕
LOADING M. ⊖
CAM SW (3)
CAM SW (2)
CAM SW (1)
GND
CAM SW (4)
DEW SENSOR
SC7704
0S0CN0684REZZ
ME DRUM MOTOR ED
DRUM PG
DRUM PG, FG GND
UR 12V
DRUM FG
DRUM GND
DRUM CTL
SC7702
0S0CN0584REZZ
MA CASSETTE CONTROL EB
CASSETTE SW
GND
START SENSOR
AT 5V
END SENSOR
SC7701
0S0CN1584REZZ
MC CAPSTAN MOTOR EA
GND
MOTOR GND
UR 12V
CURRENT LIMIT
CAPSTAN CTL
V REF (2.5V)
CAPSTAN FG
CAPSTAN RVS
PC 5V
MF SENSOR
GND
PC 5V
TU REEL PULSE
UR 12V
BRK SOLENOID
P7715
N0378GE
MR A/C HEAD EO
CTL HEAD ⊖
CTL HEAD ⊕
GND
P7711
N0478GE
JB FRONT A/V EK
KEY IN 1
KEY IN 2
ALL CLEAR
GND
P7714
N0478GE
AG MOTHER EN
COMPOSITE SYNC.
TV POWER (H)
EE (L)
GND
P7712
N0878GE
EL MOTHER AD
VIDEO IN
GND
VIDEO OUT
GND
AUDIO IN
GND
AUDIO OUT
GND
P7705
N0578GE
EE A/C HEAD MH
AUDIO HEAD(PB)
AUDIO HEAD(REC)
GND
AUDIO ERASE
AUDIO ERASE
EF FE HEAD MJ
FULL ERASE
GND
P7706
N0247RE
P7713
N0878GE
EM MOTHER AF
TV CLOCK
TV DATA
SYS-CON DATA
SYS-CON READY
SYNC. DET. (H)
COUNTER PULSE
ALL CLEAR
GND
P7716
N0678GE
EP MOTHER AE
PC 9V
GND
UR 7V
UR 12V
MOTOR GND
P-CON (L)
GND
RESET (L)
CAPSTAN ACC/STOP
CAPSTAN LIMIT
CAPSTAN RVS
SYSCON DATA
TV DATA
TV CLOCK
SYSCON READY (L)
LODING M FWD
LODING M RVS
COUNTER PULSE
START SENSOR
END SENSOR
AL PB (H)
POWER CTL (H)
BIAS CTL (H)
SIGNAL 50 (H)
YC CLOCK
YC DATA
N.C.
DEW IN
CAPSTAN FG IN
DFG AMP OUT
DFG AMP IN
DRUM FG IN
DRUM PG IN
GND (ANALOG)
SERVO REF OUT
SERVO REF IN
CTL CLAMP (-)
CTL CLAMP (+)
CTL TPZ
CTL HEAD (-)
CTL HEAD (+)
CTL AMP IN SW
CTL AMP IN
CTL AMP AC GND
CTL AMP GND
AGC
PB CTL OUT
AT 5V (ANALOG)
BUFFER
AUX
LINE
TUNER
EE
PB
SP
ALC
MUTE
REC
BIAS
EP
AL PB 5V
PC 9V
AT 5V
PC 5V
BIAS CTL 9V
UR 12V
MOTOR GND
X8801
M4421GE
PG ADJ.
R6634
M4421GE
BIAS ADJ
TP6601
BIAS(+)
TP6602
BIAS(-)
L2301
220μH
L6602
220μH
FB6601
BLN-0014GE
R9903
3.3
(1/4W)

SCHEMATIC DIAGRAM: Head Amp, LED, Operation, A/V Jack Unit/
SCHEMADIAGRAMM: Kopfverstärker, LED, Funktion, A/V-Buchsengruppe

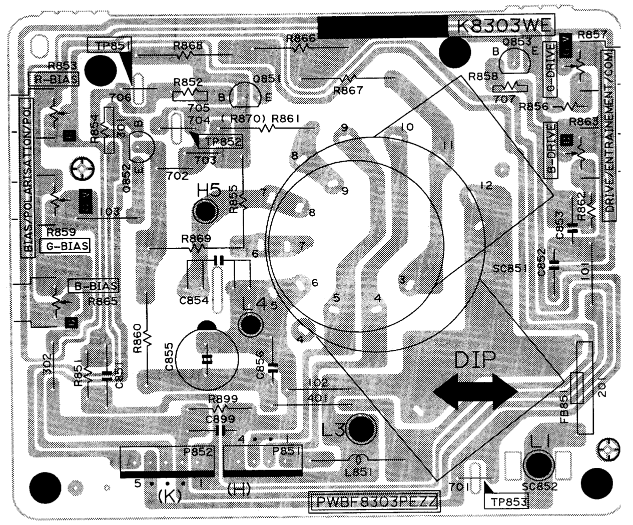

HEAD AMP
DUNTK4815TEV2 (VT-3700S)
DUNTK4815TEV4 (VT-5400S)
SLD3301 PSLDM4372AJFW (FRAME)
SLD3302 PSLDM4373AJFW (COVER)
SC3302
CE Y/C XB
10 SP (L)
9 ATR ENVELOPE
8 PB FM
7 GND
6 PB CHROMA
5 PC 5V
4 H. SW. P
3 BIAS CTL 9V
2 REC SIGNAL
1 GND
R3315 1K
C3318 .001
L3301 100µH (MK)
L3302 100µH (MK)
R3316 1K
C3317 .01
R3304 1.2K
C3319 47 (6.3V)
C3320 .01
C3321 47 (16V)
C3322 .01
R3306 33K
R3305 5.6K
JP302
R3309 10
R3307 150K
R3303 1K
C3313 .01
IC3301
STV5715
GND
TRIV ADJ
VCC
PB ON
REC ON
V REC
C CAS
JP304
R3301 0
C3306 .022
C3310 .022
C3311 .022
C3312 .022 (ML)
C3308 .1 (50V)
C3309 .1 (50V)
D3302 1SS119
D3301 1SS119
R3323 0
R3326 0
R3302 680
C3307 .022
SC3301
XA V-BASE ZA
1 N.C
2 V.H (PB-L)
3 V.H (REC)
4 V.H (PB-R)
5 N.C
PWB-X
F4815AJ
LED
DUNTK4814TEV0 (VT-3700S)
DUNTK4817TEV0 (VT-5400S)
PWB-L
F4814AJ (VT-3700S)
F4817AJ (VT-5400S)
POWER/ WAKE-UP TIMER LED
P-ON : GREEN,P-OFF : RED
WAKE-UP TIMER : ORANGE
D8301 PX0196GE
P8301 N0778GE
AL MOTHER LA
1 TV POWER LED R
2 TV POWER LED G
3 GND
4 REC LED
5 TIMER LED
6 CHILD LOCK
7 DEW LED
R8301 180
R8302 150
R8303 270
R8304 220
D8302 PX0196GE
REC/TIMER LED
REC : RED
TIMER STANDBY : GREEN
TIMER REC : ORANGE
CHILD LOCK LED
D8303 PX0192GE
R8305 270
DEW LED
D8304 PX0192GE
R8306 270
OPERATION
DUNTK4813TEV0
STOP/EJECT S8104 K0079GE
PLAY S8102 K0079GE
FF S8101 K0079GE
REW S8103 K0079GE
R8103 2.2K
R8102 1.5K
R8101 1.2K
P8101 N0278GE
PWB-H
F4813AJ
A/V JACK
DUNTK4812TEV1
CN8203 CNW-0133AJ
JC KEY IN 1 GND
PWB-J
F4812AJ
P8204 N0378GE
TEST JD
1 KEY IN 1
2 KEY IN 2
3 GND
FRONT A/V JACK
J8201 JAKF0001AJ
VIDEO IN
AUDIO IN
RESET S8206 K0079GE
REC S8201 K0079GE
S-VOL ▼ S8205 K0079GE
S-VOL ▲ S8204 K0079GE
CH ▼ S8203 K0079GE
CH ▲ S8202 K0079GE
L8201 12µH (XF)
R8213 100
C8202 .01
R8207 18K
R8206 6.8K
R8205 3.9K
P8202 N0478GE
EK VCR JB
1 KEY IN 1
2 KEY IN 2
3 ALL CLEAR
4 GND
R8201 100
R8204 100
R8210 100
R8202 8.2K
R8203 5.6K
TP8201 TEST
TP8202 GND
P8201 N0678GE
JA MOTHER AB
1 AUX VIDEO IN
2 GND (VIDEO)
3 AUX AUDIO IN
4 GND (AUDIO)
5 TV KEY IN
6 GND
C8203 1000P
R8211 100
H G F E D C B A
1 2 3 4 5 6 7 8 9 10 11 12

PRINTED WIRING BOARD ASSEMBLIES/ LEITERPLATINEN-BAUGRUPPEN

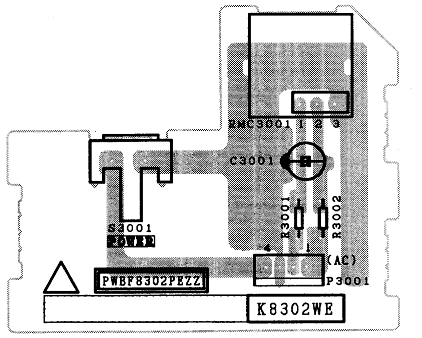
■ TV SECTION / TV-TEIL


K8300WE
PWBF8300PEZZ
DIP
CAUTION
T2AH
TU201 TUNER
IC702
IC701
IC501
IC1001
IC1002
IC1003
IC1004
IC301
IC401
IC402
IC403
T701
T601
T602
T202
SUB-CONT
V-CENT
V-LIN
V-SIZE
TP601
TP602
TP201
H
G
F
E
D
C
B
A
1
2
3
4
5
6
7
8
9
10
11
12

PWB-A: Mother Unit (Wiring Side)/
LEITERPLATTE A: Muttereinheit (Verdrahtungsseite)

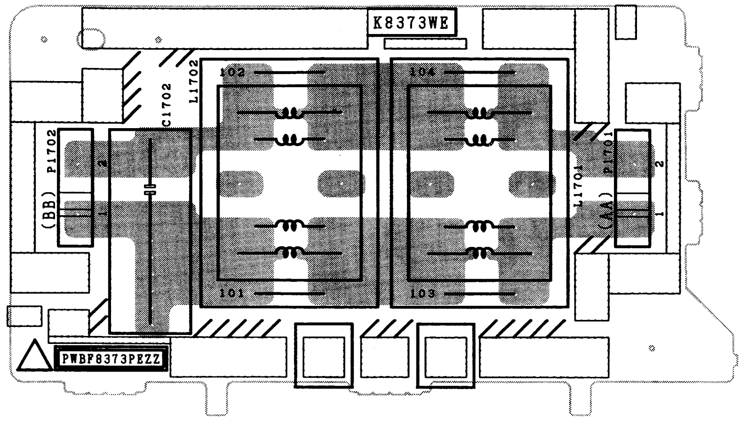

K8303WE
PWBF8303PEZZ
R-BIAS
G-BIAS
B-BIAS
BIAS/POLARISATION/POL
DRIVE/ENTRAINEMENT/PWG
DIP
H5
L4
L3
TP851
TP852
TP853

PWB-B: CRT Socket Unit (Wiring Side)
LEITERPLATTE B: Bildröhren-Anschluß (Verdrahtungsseite)

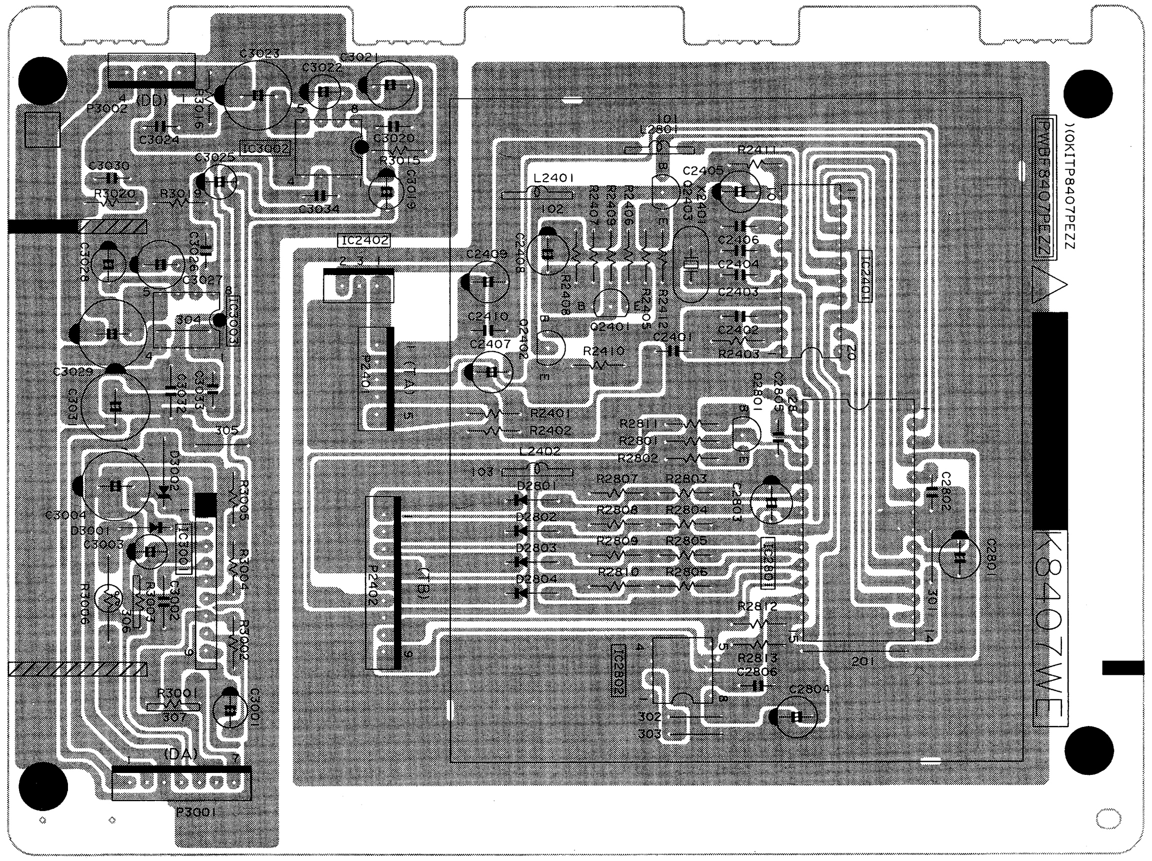

RMC3001
C3001
S3001
R3001
R3002
(AC)
P3001
PWBF8302PEZZ
K8302WE

PWB-D: Power SW, R/C Unit (Wiring Side)
LEITERPLATTE D: Netzschalter, R/C-Einheit (Verdrahtungsseite)

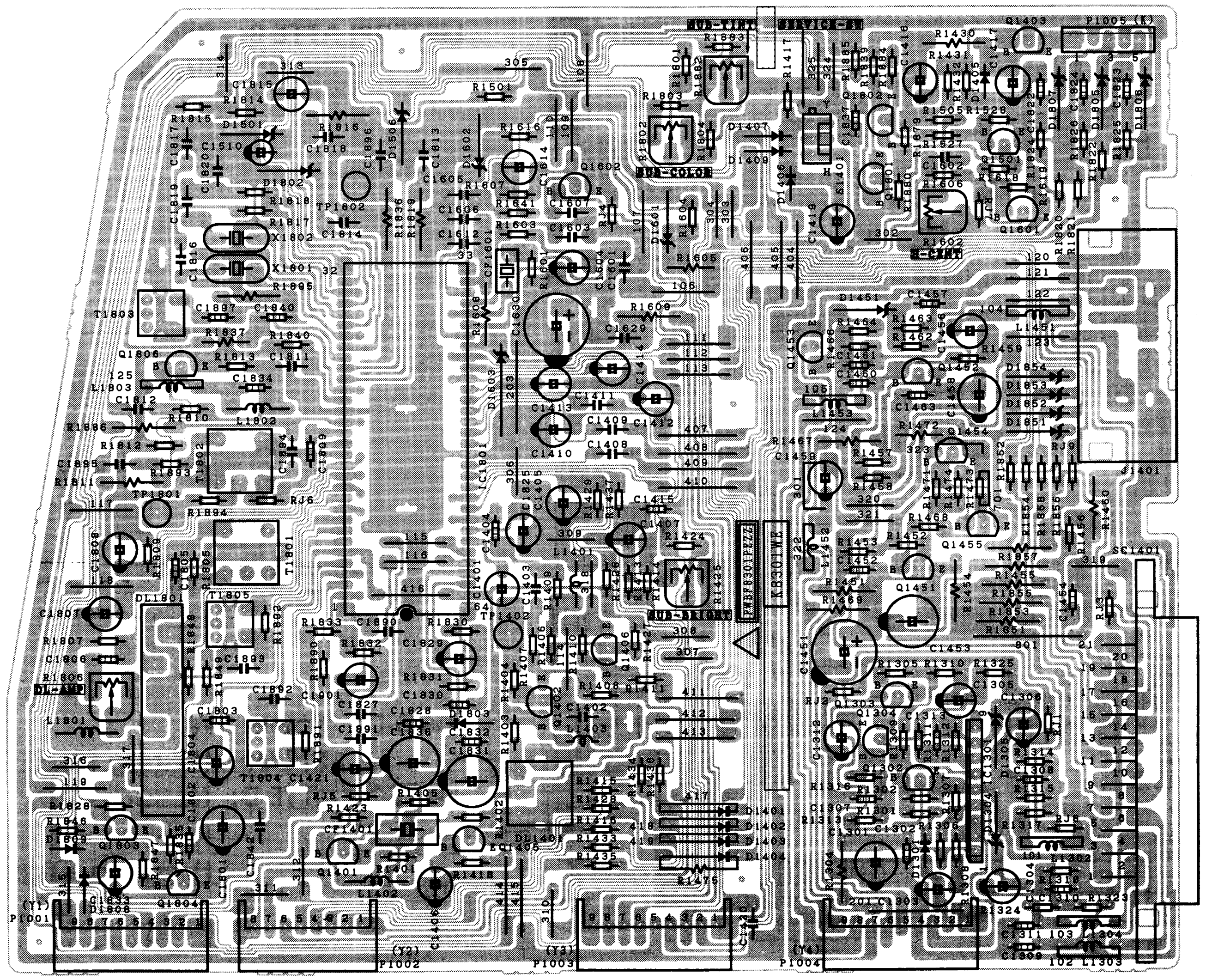
■ TV SECTION / TV-TEIL


K8373WE
PWBF8373PEZZ
P1702
(BB)
C1702
L1702
102
104
101
103
L1701
P1701
(AA)

PWB-F: Line Filter Unit (Wiring Side)/
LEITERPLATTE F: Line-Filtereinheit (Verdrahtungsseite)


K8407WE
PWBF8407PEZZ
P3002
(DD)
P3001
(DA)
IC3002
IC3001
IC2402
IC2401
IC2802
P2402
(TB)
P2401
(TA)
C2801
C2802

PWB-T: TEXT Unit (Wiring Side)
(Only for VT-5400S)
LEITERPLATTE T: TEXT-Einheit (Verdrahtungsseite)
(Nur füs VT-5400S)


K8301WE
PWBF8301PEZZ
P1005 (K)
IC1801
IC1401
T1803
T1802
T1801
T1804
T1805
Q1451
Q1455
Q1403
(Y1)
P1001
(Y2)
P1002
(Y3)
P1003
(Y4)
P1004
L1303
SC1401

PWB-Y: VCJ, A/V Unit (Wiring Side)/
LEITERPLATTE Y: VJC, A/V-Einheit (Verdrahtungsseite)

■ VCR SECTION / VIDEORECORDER-TEIL

H

G

F

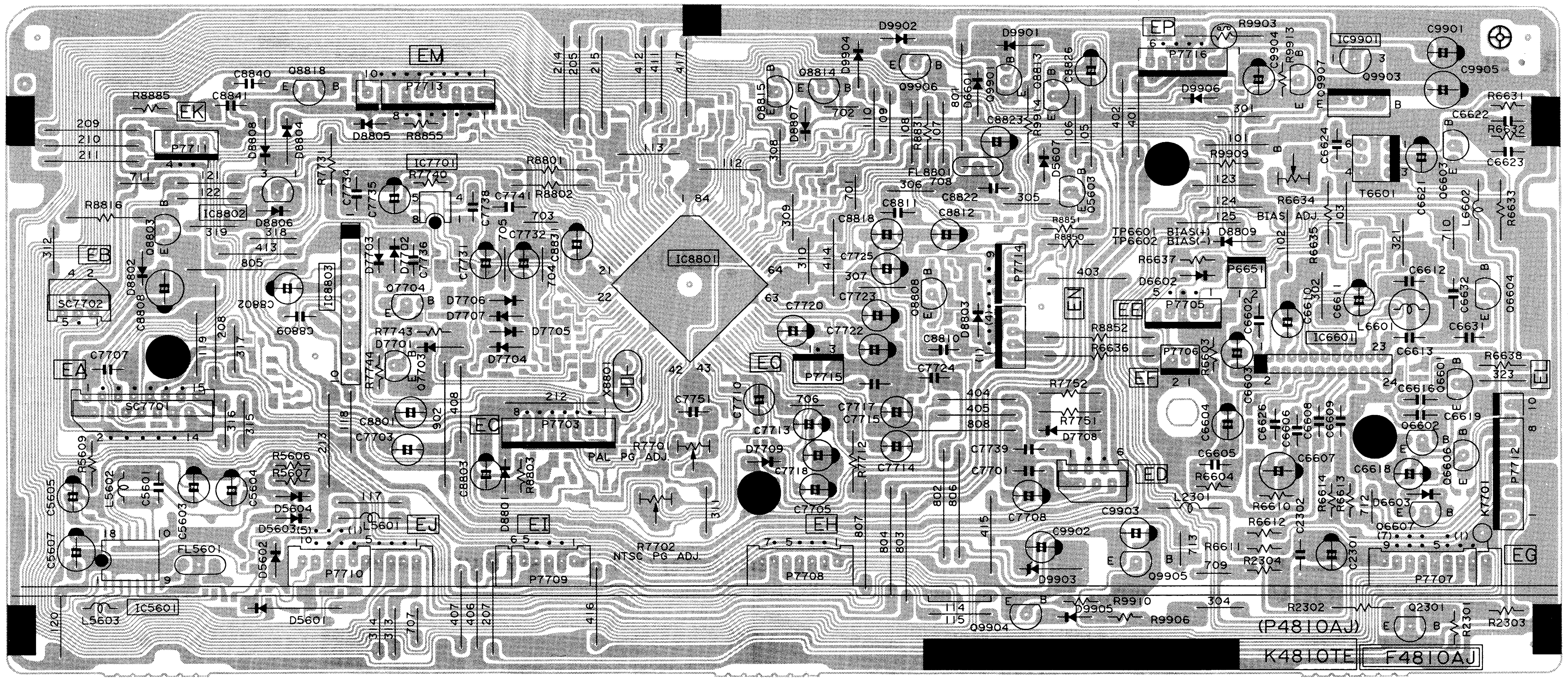
E

D

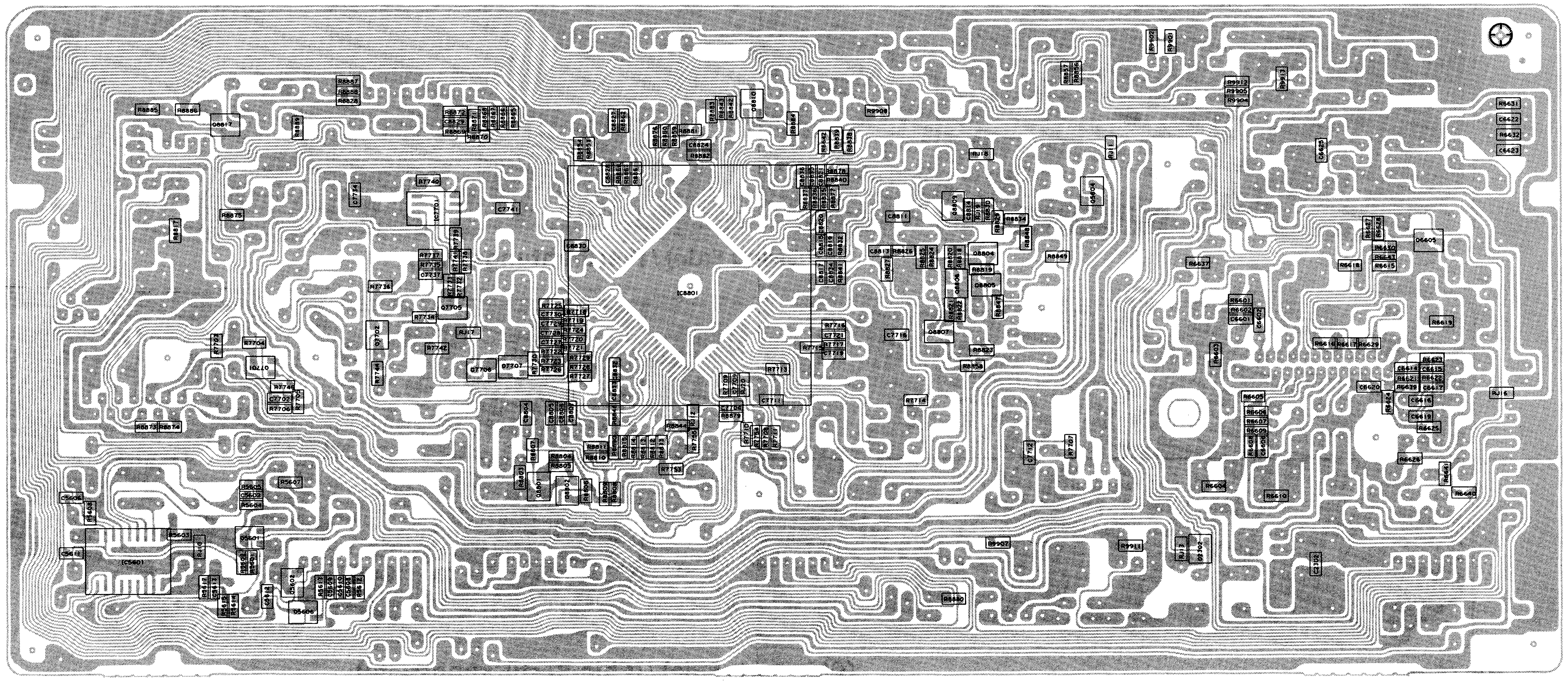
C

B

A


EM
EK
EB
EA
EP
EN
EE
EF
EL
EC
EQ
EJ
EI
EH
ED
EG
IC8801
IC7701
IC8802
IC8803
IC9901
IC6601
IC5601
SC7702
SC7701
FL5601
FL8801
P7713
P7711
P7716
P7714
P7705
P7706
P7715
P7703
P7710
P7709
P7708
P7707
P7712
T6601
PAL PG ADJ.
NTSC PG ADJ.
TP6601 BIAS(+)
TP6602 BIAS(-)
BIAS ADJ.
(P4810AJ)
K4810TE
F4810AJ

(Wiring Side) / (Verdrahtungsseite)

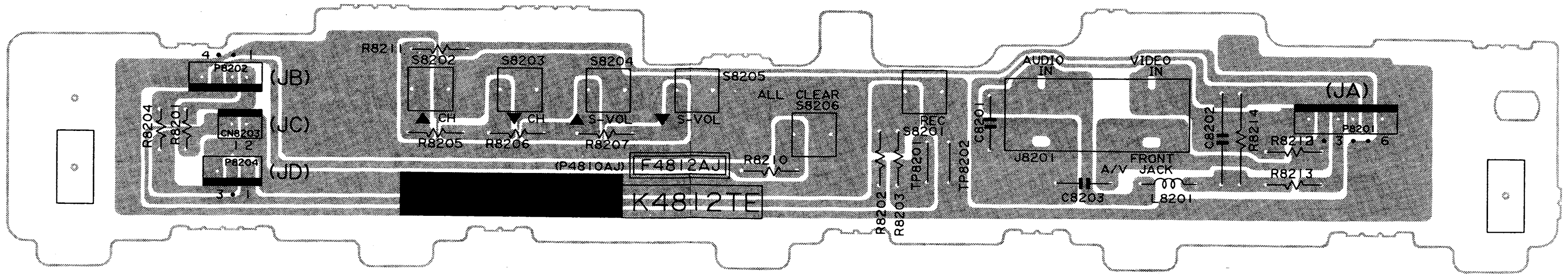

IC8801
IC5601

PWB-E: Main Unit/
LEITERPLATTE E: Haupteinheit

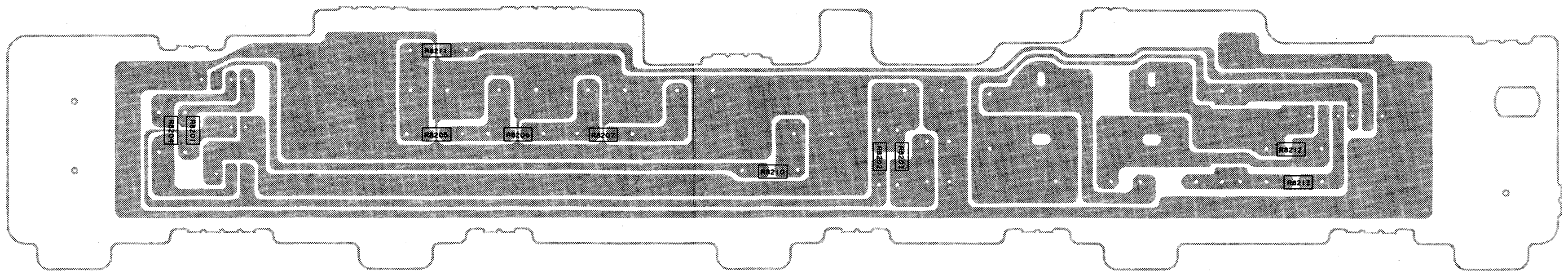
(Chip Parts Side) / (Chip-Bestückungsseite)

1 2 3 4 5 6 7 8 9 10 11 12

■ VCR SECTION / VIDEORECORDER-TEIL

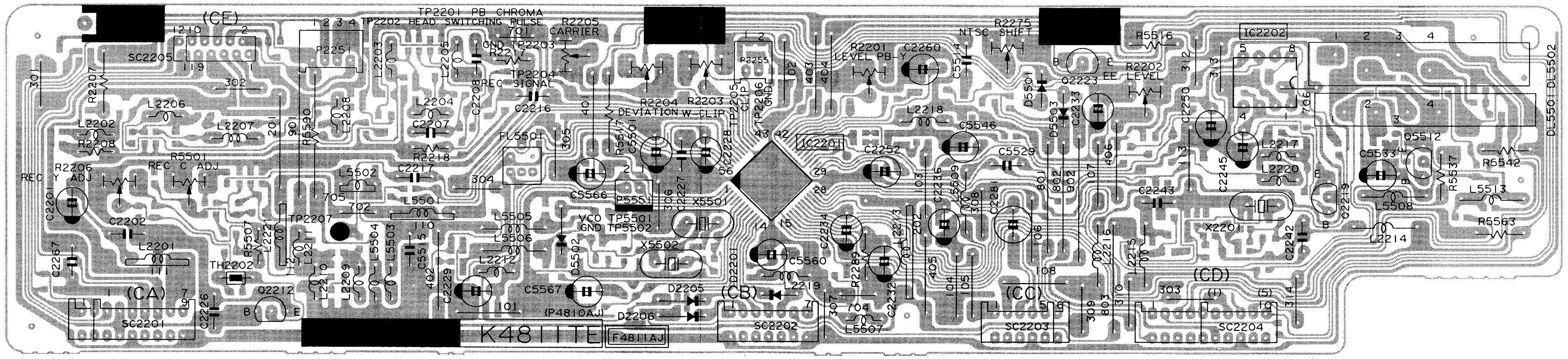

(JB)
(JC)
(JD)
(JA)
P8202
CN8202
P8204
P8201
R8204
R8201
R8211
S8202
S8203
S8204
S8205
S8206
S8201
CH
S-VOL
ALL CLEAR
REC
R8205
R8206
R8207
R8210
(P4810AJ)
F4812AJ
K4812TE
R8202
R8203
TP8201
TP8202
C8201
J8201
AUDIO IN
VIDEO IN
FRONT A/V JACK
C8203
L8201
C8202
R8214
R8212
R8213

(Wiring Side) / (Verdrahtungsseite)

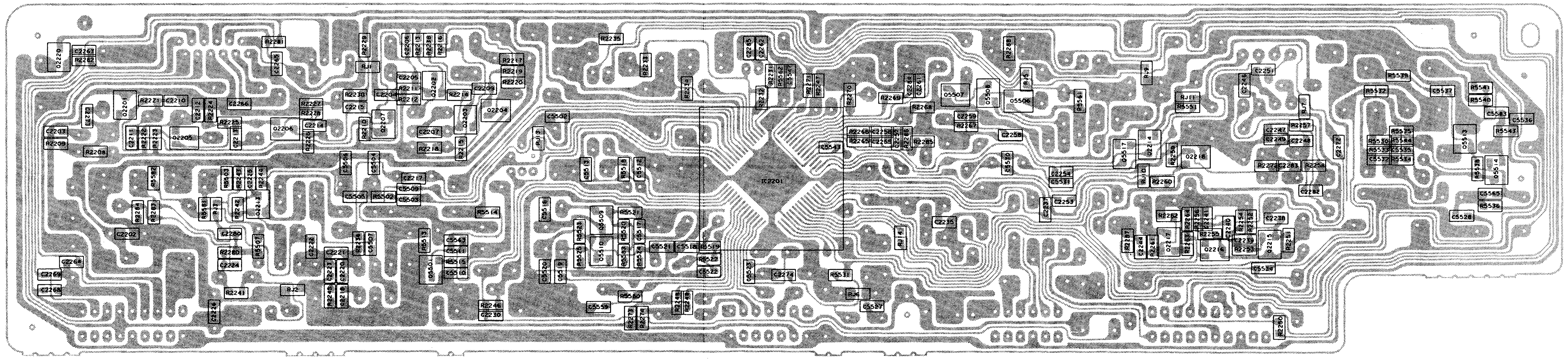


(Chip Parts Side) / (Chip-Bestückungsseite)

PWB-J: A/V Jack Unit/
LEITERPLATTE J: A/V-Buchseneinheit


(CE)
(CA)
(CB)
(CC)
(CD)
SC2205
SC2201
SC2202
SC2203
SC2204
TP2201 PB CHROMA
TP2202 HEAD SWITCHING PULSE
R2205 CARRIER
TP2203
TP2204 REC SIGNAL
R2204 DEVIATION
R2203 W-SLIP
R2201 LEVEL PB-Y
R2275 NTSC SHIFT
R2202 EE LEVEL
REC Y ADJ
REC C ADJ
IC2201
IC2202
X5501
X5502
X2201
VCO
TP5501
TP5502
D2205
D2206
Q2212
Q2223
TH2202
TP2207
FL5501
(P4810AJ)
K4811TE
F4811AJ
DL5501
DL5502
Q5512
L5513
R5563
R5537
R5542

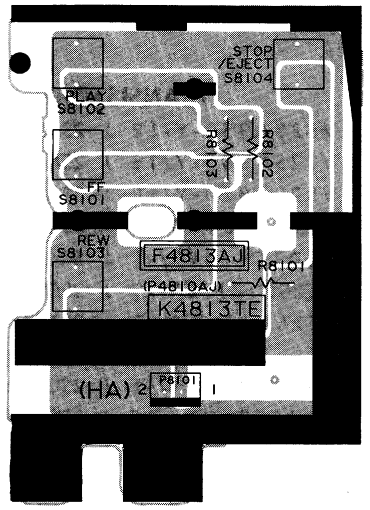
(Wiring Side) / (Verdrahtungsseite)



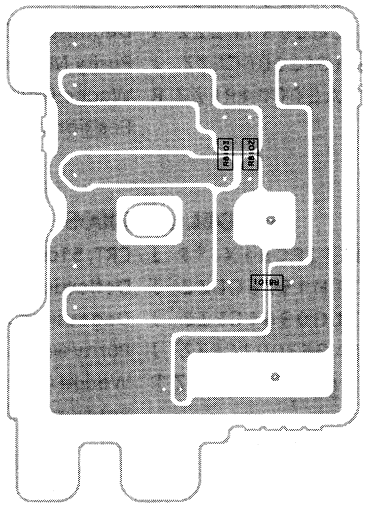
(Chip Parts Side) / (Chip-Bestückungsseite)

PWB-C: Y/C Unit/
LEITERPLATTE C: Y/C-Einheit

■ VCR SECTION / VIDEORECORDER-TEIL

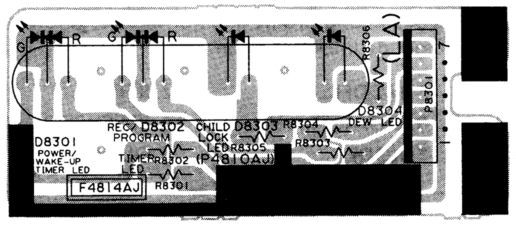

STOP /EJECT S8104
PLAY S8102
R8103
R8102
FF S8101
REW S8103
F4813AJ
R8101
(P4810AJ)
K4813TE
(HA)
P8101

(Wiring Side)/
(Verdrahtungsseite)

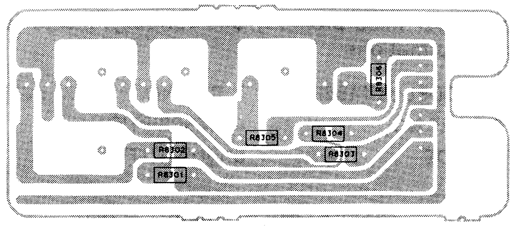


(chip Parts Side)/
(Chip-Bestückungsseite)

PWB-H: Operation Unit/
LEITERPLATTE H: Betriebseinheit

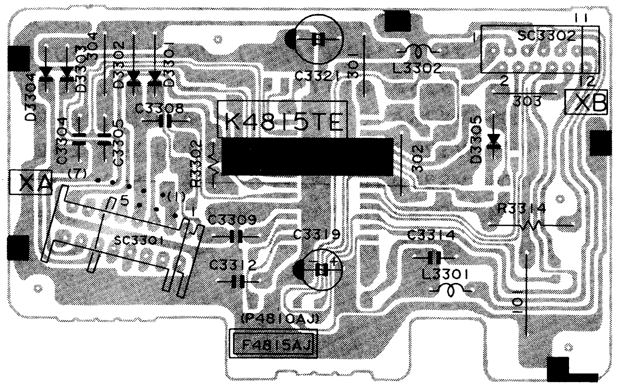

G
R
D8301 POWER/ WAKE-UP TIMER LED
REC/ PROGRAM TIMER LED
D8302
CHILD LOCK LED
D8303
R8304
R8305
R8303
R8302
R8301
R8306
D8304 DEW LED
P8301
(P4810AJ)
F4814AJ
(LA)

(Wiring Side)/
(Verdrahtungsseite)

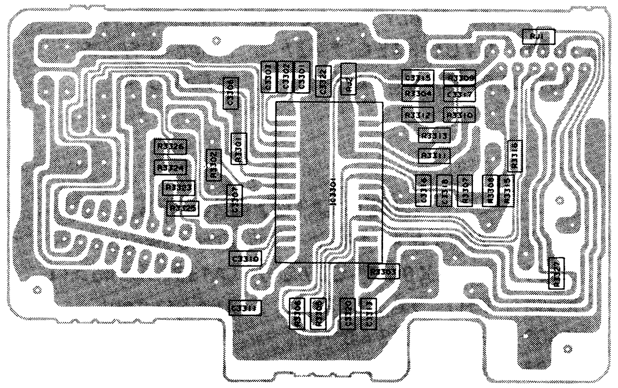


(Chip Parts Side)/
(Chip-Bestückungsseite)

PWB-L: LED Unit (VT-3700S)/
LEITERPLATTE L: LED-Einheit (VT-3700S)

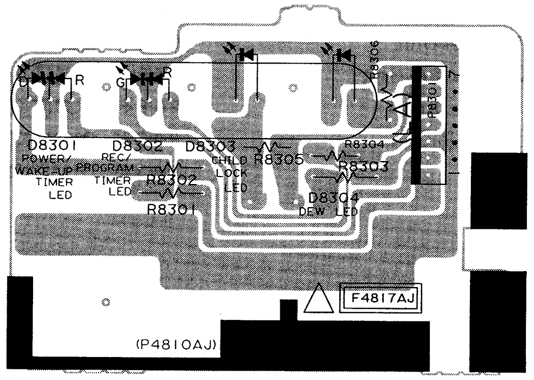

D3304
D3303
D3302
D3301
C3304
C3305
C3308
K4815TE
R3302
C3321
L3302
SC3302
XB
XA
SC3301
C3309
C3312
C3319
C3314
L3301
R3314
D3305
(P4810AJ)
F4815AJ

(Wiring Side)/
(Verdrahtungsseite)



(Chip Parts Side)/
(Chip-Bestückungsseite)

PWB-X: Head Amp. Unit/
LEITERPLATTE X: Kopfverstärker-Einheit


G
R
D8301 POWER/ WAKE-UP TIMER LED
D8302 REC/ PROGRAM TIMER LED
D8303 CHILD LOCK LED
R8302
R8301
R8305
R8304
R8303
R8306
D8304 DEW LED
P8301
F4817AJ
(P4810AJ)

(Wiring Side)/
(Verdrahtungsseite)

PWB-L: LED Unit (VT-5400S)/
LEITERPLATTE L: LED-Einheit (VT-5400S)

PARTS LIST

PARTS REPLACEMENT

Replacement parts which have these special safety characteristics identified in this manual: electrical components having such features are identified by "⚠" in the Replacement Parts Lists.
The use of a substitute replacement part which does not have the same safety characteristics as the factory recommended replacement parts shown in this service manual may create shock, fire or other hazards.

"HOW TO ORDER REPLACEMENT PARTS"

To have your order filled promptly and correctly, please furnish the following informations.

1. MODEL NUMBER	2. REF. NO.
3. PART NO.	4. DESCRIPTION
5. CODE	6. QUANTITY

MARK ★: SPARE PARTS-DELIVERY SECTION.

ERSATZTEILLISTE

AUSTAUSCH VON TEILEN

Ersatzteile, die besondere Sicherheitseigenschften haben, sind in dieser Anleitung markiert. Elektrische Komponenten mit solchen Eigenshaften sind in den Ersatzteil durch "⚠" gekenn-zeichnet.
Der Gebrauch von Ersatzteilen, die nicht deselben Sicherheits-eigenschaften haben wie die vom Hersteller empfohlenen ud in der Bedienungsanleitung angegebenen, können zur Ursache von Blitzeinschlägen, Bränden und anderen Gefahren werden.

"WIE MAN ERSATSTEILE BESTELLT"

Damit Ihre Bestellung promt und korrekt ausgeführt wird, geben Sie bitte folgende Informationen.

1. MODELL NR.	2. REF. NR.
3. ERSATZTEIL NR.	4. BESCHREIBUNG
5. KODE	6. QUANTITÄT

MARKIERUNG ★: ERSATZTEILE-LIEFERUNG

ELECTRICAL PARTS

PRINTED WIRING BOARD ASSEMBLIES
(*NOT REPLACEMENT ITEM*)
Model VT-3700S

TV Section

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTK8300WEV3	–	Mother Unit	—
PWB-B	DUNTK8303WEV2	–	CRT Socket Unit	—
PWB-D	DUNTK8302WEV2	–	Power SW, R/C Unit	—
PWB-F	DUNTK8373WEV2	–	Line Filter Unit	—
PWB-Y	DUNTK8301WEV2	–	VCJ, A/V Unit	—

VCR Section

Ref. No.	Part No.	★	Description	Code
PWB-C	DUNTK4811TEV3	–	Y/C Unit	—
PWB-E	DUNTK4810TEV3	–	Main Unit	—
PWB-H	DUNTK4813TEV0	–	Operation Unit	—
PWB-J	DUNTK4812TEV1	–	A/V Jack Unit	—
PWB-L	DUNTK4814TEV0	–	LED Unit	—
PWB-X	DUNTK4815TEV2	–	Head Amp. Unit	—

—— End of P.W.B. ASSEMBLIES (VT-3700S) ——

PRINTED WIRING BOARD ASSEMBLIES
(*NOT REPLACEMENT ITEM*)
Model VT-5400S

TV Section

Ref. No.	Part No.	★	Description	Code
PWB-A	DUNTK8300WEV6	–	Mother Unit	—
PWB-B	DUNTK8303WEV6	–	CRT Socket Unit	—
PWB-D	DUNTK8302WEV6	–	Power SW, R/C Unit	—
PWB-F	DUNTK8373WEV6	–	Line Filter Unit	—
PWB-Y	DUNTK8301WEV6	–	VCJ, A/V Unit	—
PWB-T	DUNTK8407WEV2	–	TEXT Unit	—

VCR Section

Ref. No.	Part No.	★	Description	Code
PWB-C	DUNTK4811TEV5	–	Y/C Unit	—
PWB-E	DUNTK4810TEV5	–	Main Unit	—
PWB-H	DUNTK4813TEV0	–	Operation Unit	—
PWB-J	DUNTK4812TEV1	–	A/V Jack Unit	—
PWB-L	DUNTK4817TEV0	–	LED Unit	—
PWB-X	DUNTK4815TEV4	–	Head Amp. Unit	—

—— End of P.W.B. ASSEMBLIES (VT-5400S) ——

PICTURE TUBE

MODEL VT-3700S

Ref. No.	Part No.	★	Description	Code
⚠ V801	VB370BVBK1U-S	R	CRT, 37cm (14")	BX
⚠ DY601	RCiLH0057PEZZ	R	Deflection Yoke	BB
⚠ L799	RCiLG0031PEZZ	R	Degaussing Coil	AN
	PMAGF3006CEZZ	J	Purity Magnet	AK
	PSPAG0004PEZZ	R	Wedge (Gum), Yoke Positioning (3 used)	AB

MODEL VT-5400S

Ref. No.	Part No.	★	Description	Code
⚠ V801	VB51JFC61X/*P	J	CRT, 51cm (21")	CX
⚠ DY601	RCiLH1576CEZZ	J	Deflection Yoke	BD
⚠ L799	RCiLG0364CEZZ	J	Degaussing Coil	AV
	PMAGF3003CEZZ	J	Purity Magnet	AK
	PSPAG0003PEZZ	R	Wedge (Gum), Yoke Positioning (3 used)	AD

—— End of PICTURE TUBE ——

PWB-A DUNTK8300WEV3/V6
MOTHER UNIT

ASSEMBLY UNITS

NOTE: THE PARTS HERE SHOWN ARE SUPPLIED AS AN ASSEMBLY BUT NOT INDEPENDENTLY.

Ref. No.	Part No.	★	Description	Code
⚠ TU201	VTUOF4EG-722/	J	Tuner, VHF/UHF	BL
UNT201	RiFU-0624GEZZ	J	IF-Pack Unit	BB

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC301	VHiTA7348P/-1	J	Audio Switch	AK
IC351	RH-iX0241CEZZ	J	LA1362, Audio ATT	AF
IC352	VHiTDA7233/-1	J	Audio Output	AF
IC402	VHiTA7348P/-1	J	Video Switch	AK
IC403	VHiNJM2220S-1	J	Sync. Separator	AG
IC501	RH-iX0640CEZZ	J	LA7830, Vertical Output	AK
IC601	RH-iX0452CEZZ	J	TA78012AP, 12V Reg.	AH
⚠ IC701	VHiSTRM6523-1	J	Power Control	BA
⚠ IC702	RH-FX0012CEZZ	J	PC113, Photo Coupler	AF
IC751	VHiTA7812S/-1	J	12V Regulator	AD
IC752	VHiPQ30RV11-1	J	9V Regulator	AF
IC753	VHiSE120N//-1	J	Error Detector	AG
IC754	VHiTA7805S/-1	J	5V Regulator	AD
IC1001	RH-iX2481CEZ2	J	Timer Control	BH
IC1002	VHiX24C02//-1	J	E^2 PROM	AN

INTEGRATED CIRCUITS (Continued)

Ref. No.	Part No.	★	Description	Code
IC1003	RH-iX2444CEZZ	J	Clock	AW
IC1004	VHiPST529D2-1	J	Reset Switch	AD
IC1005	RH-iX0249CEZZ	J	33V Regulator	AE

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q201	VS2SA950-Y/1E	J	2SA950-Y, Band Sw. B_L	AD
Q202	VS2SA950-Y/1E	J	2SA950-Y, Band Sw. B_H	AD
Q203	VS2SA950-Y/1E	J	2SA950-Y, Band Sw. B_U	AD
Q206	VS2SK304CD/-1	J	2SK304CD, AFT Sw.	AC
Q209	VSDTC144ES/-1	J	DTC144ES	AB
Q402	VS2SC1815GW-1	J	2SC1815(G), Video Amp.	AB
Q404	VS2SA1015Y/1E	J	2SA1015(Y), ABL (VT-3700S)	AC
Q501	VS2SC1815GW-1	J	2SC1815(G), V-Sync. Inv.	AB
Q601	VS2SC3620//1E	J	2SC3620, H-Drive	AE
⚠ Q602	VS2SD1554//1E	J	2SD1554, H-Output (VT-3700S)	AL
⚠ Q602	VS2SD1555//1E	J	2SD1555, H-Output (VT-5400S)	AP
Q603	VS2SA1015Y/1E	J	2SA1015(Y), Protector	AC
Q604	VS2SC1815GW-1	J	2SC1815(G), H-Sync. Inv.	AB
⚠ Q701	VS2SC1815GW-1	J	2SC1815(G), Error Amp.	AB
Q751	VS2SC1815GW-1	J	2SC1815(G), Relay Sw.	AB
Q753	VS2SC1815GW-1	J	2SC1815(G), Protector	AB
Q755	VS2SC1815GW-1	J	2SC1815(G), Protector	AB
Q756	VS2SC1815GW-1	J	2SC1815(G), Protector	AB
Q761	VS2SC1815GW-1	J	2SC1815(G), 33V Reg.	AB
Q762	VS2SC3279N/-1	J	2SC3279N, H-Vcc Reg.	AC
Q1001	VS2SC383-WT-1	J	2SC383, V_T Amp.	AE
Q1002	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1003	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1004	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1005	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1006	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1007	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1008	VS2SA1015Y/1E	J	2SA1015(Y), LED Drive	AC
Q1009	VS2SA1015Y/1E	J	2SA1015(Y), Power	AC
Q1010	VS2SC1815GW-1	J	2SC1815(G), Buffer	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D203	RH-EX0400CEZZ	J	Zener Diode	AC
D204	VHD1SS119//1E	J	1SS119	AA
D351	VHD1SS119//1E	J	1SS119	AA
D352	RH-EX0315CEZZ	J	Zener Diode	AA
D401	RH-EX0168GEZZ	J	Zener Diode	AA
D402	RH-EX0168GEZZ	J	Zener Diode	AA
D403	VHD1SS119//1E	J	1SS119 (VT-3700S)	AA
D404	VHD1SS119//1E	J	1SS119	AA
D501	RH-DX0127CEZZ	J		AC

PWB-A DUNTK8300WEV3/V6
MOTHER UNIT (Continued)

DIODES (Continued)

Ref. No.	Part No.	★	Description	Code
D503	RH-DX0055TAZZ	J		AD
D504	VHD1SS119//1E	J	1SS119 (VT-3700S)	AA
D505	RH-EX0298CEZZ	J	Zener Diode(VT-3700S)	AA
D601	RH-DX0079TAZZ	J		AE
D602	VHD1SS119//1E	J	1SS119	AA
D603	RH-DX0110CEZZ	J		AB
D604	RH-EX0051CEZZ	J	Zener Diode	AB
D605	RH-DX0073CEZZ	J		AD
D606	RH-DX0110CEZZ	J		AB
⚠ D701	RH-DX0055TAZZ	J		AD
⚠ D702	RH-DX0055TAZZ	J		AD
⚠ D703	RH-DX0055TAZZ	J		AD
⚠ D704	RH-DX0055TAZZ	J		AD
⚠ D706	RH-DX0130CEZZ	J		AE
⚠ D707	RH-DX0130CEZZ	J		AE
⚠ D708	RH-DX0130CEZZ	J		AE
⚠ D709	RH-DX0130CEZZ	J		AE
⚠ D710	RH-DX0130CEZZ	J		AE
⚠ D711	RH-DX0130CEZZ	J		AE
⚠ D712	RH-DX0164CEZZ	J		AC
D751	RH-DX0226CEZZ	J		AC
D752	VHD1SS119//1E	J	1SS119	AA
D753	RH-DX0224CEZZ	J		AB
D755	VHD1SS119//1E	J	1SS119	AA
D756	RH-DX0224CEZZ	J		AB
D757	RH-EX0217CEZZ	J	Zener Diode	AB
D758	RH-DX0224CEZZ	J		AB
D759	RH-DX0224CEZZ	J		AB
D762	RH-EX0019GEZZ	J	Zener Diode	AC
D763	VHD1SS119//1E	J	1SS119	AA
D764	RH-EX0395GEZZ	J	Zener Diode	AA
D766	RH-EX0152CEZZ	J	Zener Diode	AE
D768	RH-EX0412GEZZ	J	Zener Diode	AA
D769	RH-EX0365GEZZ	J	Zener Diode	AA
D1001	VHD1SS119//1E	J	1SS119	AA
D1003	VHD1SS119//1E	J	1SS119	AA
D1005	VHD1SS119//1E	J	1SS119	AA
D1006	VHD1SS119//1E	J	1SS119	AA
D1007	VHD1SS119//1E	J	1SS119	AA
D1008	VHD1SS119//1E	J	1SS119	AA
D1012	VHD1SS119//1E	J	1SS119	AA
D1013	VHD1SS119//1E	J	1SS119	AA
D1015	VHD1SS119//1E	J	1SS119 (VT-5400S)	AA
D1018	VHD1SS119//1E	J	1SS119 (VT-5400S)	AA
D1021	VHD1SS119//1E	J	1SS119	AA
D1027	VHD1SS119//1E	J	1SS119	AA
D1028	VHD1SS119//1E	J	1SS119	AA
D1029	VHD1SS119//1E	J	1SS119	AA
D1030	VHD1SS152//-1	J	1SS152	AB
D1034	VHD1SS119//1E	J	1SS119 (VT-5400S)	AA
⚠ VA701	RH-VX0033CEZZ	J	Varistor	AD

PACKAGED CIRCUITS

Ref. No.	Part No.	★	Description	Code
⚠ PR701	RMPTP0028CEZZ	J	Positive Coefficient Thermistor	AG
X1001	RCRSB0090GEZZ	J	Crystal, Clock Osc.	AE

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
CF1001	RFiLC0112GEZZ	J	Ceramic Filter	AC
L201	VP-DF120K0000	J	Coil, 12μH	AB
L601	RCiLZ0004PEZZ	R	Coil, Horizontal Line. (VT-3700S)	AN
L601	RCiLZ0007PEZZ	R	Coil, Horizontal Line. (VT-5400S)	AK
L602	RCiLP0088CEZZ	J	Coil, Peaking	AG
L603	VP-DF100K0000	J	Coil, 10μH	AB
L751	RCiLP0106CEZZ	J	Coil, Peaking	AE
L752	VP-CF3R3K0000	J	Coil, 3.3μH	AB
L753	VP-CF3R3K0000	J	Coil, 3.3μH	AB
L754	VP-DF180K0000	J	Coil, 18μH	AB
L1001	VP-XF120K0000	J	Coil, 12μH	AB
L1002	VP-DF120K0000	J	Coil, 12μH	AB
T601	RTRNZ0179CEZZ	J	Horizontal Drive Trans. (VT-3700S)	AE
T601	RTRNZ0026PEZZ	R	Horizontal Drive Trans. (VT-5400S)	AH
⚠ T602	RTRNF0096PEZZ	R	Flyback Trans, (FBT) (VT-3700S)	BE
⚠ T602	RTRNF0097PEZZ	R	Flyback Trans, (FBT) (VT-5400S)	BF
⚠ T701	RTRNZ0059PEZZ	R	Regulator Trans. (VT-3700S)	AX
⚠ T701	RTRNZ0061PEZZ	R	Regulator Trans. (VT-5400S)	AX
T1001	RCiLB0045CEZZ	J	Oscillation Coil, OSD	AE

CONTROLS

Ref. No.	Part No.	★	Description	Code
R421	RVR-M4632GEZZ	J	100k(B)Sub-Contrast	AB
R503	RVR-M4632GEZZ	J	100k(B)Vertical Size	AB
R526	RVR-M4626GEZZ	J	10k(B) Vertical Linearity (VT-3700S)	AB
R526	RVR-M4624GEZZ	J	4.7k(B) Vertical Linearity (VT-5400S)	AB

CAPACITORS

Ref. No.	Part No.	★	Description			Code
C201	VCEAGA1CW337M	J	330	16V	Electrolytic	AC
C202	VCEAGA1CW476M	J	47	16V	Electrolytic	AB
C203	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA
C204	VCEAGA1HW104M	J	0.1	50V	Electrolytic	AA
C205	VCEAGA1CW106M	J	10	16V	Electrolytic	AA
C206	VCEAGA1HW475M	J	4.7	50V	Electrolytic	AB
C207	VCKYMN1CY103N	J	0.01	16V	Ceramic	AA

PWB-A DUNTK8300WEV3/V6 MOTHER UNIT (Continued)

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C208	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C209	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C210	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C211	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C212	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA
C213	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C215	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C301	VCEAGA1HW224M	J	0.22 50V Electrolytic	AA
C302	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C303	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C304	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C305	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C306	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA
C309	VCKYPA1HB102K	J	1000p50V Ceramic	AA
C351	VCEAGA1HW106M	J	10 50V Electrolytic	AC
C352	VCKYD11EX182N	J	1800p25V Ceramic	AA
C353	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C354	VCEAGA1CW477M	J	470 16V Electrolytic	AC
C355	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C356	VCEAGA1HW106M	J	10 50V Electrolytic	AC
C357	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C360	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C361	VCEAGA1CW477M	J	470 16V Electrolytic	AC
C362	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C363	VCQYTA1HM223J	J	0.022 50V Mylar	AA
C364	RC-KZ0019GEZZ	J	0.1 Ceramic	AA
C401	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C407	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C408	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C409	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C410	VCKYMN1HB102K	J	1000p50V Ceramic	AA
C411	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C412	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C413	VCEAGA1CW108M	J	1000 16V Electrolytic	AD
C414	VCE9GA1CW476M	J	47 16V Elect. (N.P)	AB
C417	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C501	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C502	VCEAGA1VW107M	J	100 35V Electrolytic	AC
C503	VCEAGA1VW477M	J	470 35V Electrolytic	AD
C504	VCKYMN1HB102K	J	1000p50V Ceramic	AA
C505	VCQYTA1HM222J	J	2200p50V Mylar	AA
C506	VCKYPA1HB221K	J	220p 50V Ceramic	AA
C507	VCEAGA1HW224M	J	0.22 50V Electrolytic	AA
C508	VCSATA1VE475K	J	4.7 35V Tantalum	AD
C509	VCE9GA1HW474M	J	0.47 50V Elect. (N.P)	AB
C510	VCQYTA1HM822J	J	8200p50V Mylar	AA
C511	VCEAGA1HW225M	J	2.2 50V Electrolytic	AB
C512	VCEAGA1VW108M	J	1000 35V Electrolytic	AD
C513	VCFYFA1HA224J	J	0.22 50V M. Polyester	AB
C514	VCEAGA1HW224M	J	0.22 50V Electrolytic	AA
C515	VCQYTA1HM104J	J	0.1 50V Mylar (VT-3700S)	AA

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C515	VCQYTA1HM683J	J	0.068 50V Mylar (VT-5400S)	AB
C516	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C517	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C601	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C602	VCEAGA1EW477M	J	470 25V Electrolytic	AD
C603	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C604	VCQYSH2DM104K	J	0.1 200V Mylar	AD
C605	VCEAGA0JW337M	J	330 6.3V Electrolytic	AB
C606	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C607	VCEAGA1HW106M	J	10 50V Electrolytic	AC
C608	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C609	VCEAGA2CW106M	J	10 160V Electrolytic	AC
C610	VCFPPD2DB474J	J	0.47 200V M. Polyester	AE
C611	VCKYPA2HB221K	J	220p 500V Ceramic	AA
C612	VCFPPD2DB564J	J	0.56 200V M. Polyester	AF
C613	VCKYPH3DB561K	J	560p 2kV Ceramic (VT-3700S)	AC
C613	RC-KZ0036CEZZ	J	330p 2kV Ceramic (VT-5400S)	AB
C614	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C615	VCFPPC3CA272H	J	2700p1.6kV M. Polyester (VT-5400S)	AD
C616	VCFPPD3CA682H	J	6800P1.6kV M. Polyester	AE
C617	VCFYSB2EB223K	J	0.022 250V M. Polyester	AC
C618	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C620	VCCSMN1HL470J	J	47p 50V Ceramic	AA
⚠C701	RC-FZ016SGEZZ	J	0.47 AC250V Special	AK
⚠C703	RC-KZ0208CEZZ	J	0.01 AC250V Ceramic	AD
⚠C704	RC-KZ0208CEZZ	J	0.01 AC250V Ceramic	AD
⚠C705	RC-KZ0208CEZZ	J	0.01 AC250V Ceramic	AD
⚠C706	RC-KZ0208CEZZ	J	0.01 AC250V Ceramic	AD
⚠C707	RC-EZ0055CEZZ	J	150 400V Electrolytic	AN
⚠C708	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
⚠C709	VCKYPA2HB472K	J	4700p500V Ceramic	AB
⚠C710	VCEAGA1EW476M	J	47 25V Electrolytic	AB
⚠C711	VCEAGA1EW108M	J	1000 25V Electrolytic	AD
⚠C712	VCKYPA2HB102K	J	1000p500V Ceramic	AA
⚠C714	VCQPSC2JA333K	J	0.033 630V Polypro Film	AB
⚠C715	RC-KZ0192CEZZ	J	1000p2kV Ceramic	AB
⚠C716	RC-KZ0192CEZZ	J	1000p2kV Ceramic	AB
⚠C720	RC-KZ0023CEZZ	J	4700p2kV Ceramic	AD
⚠C721	RC-KZ0023CEZZ	J	4700p2kV Ceramic	AD
⚠C723	RC-KZ0189CEZZ	J	560p 2kV Ceramic	AB
⚠C724	RC-KZ0019GEZZ	J	0.1 Ceramic	AA
⚠C725	RC-KZ0192CEZZ	J	1000p2kV Ceramic	AB
C751	RC-KZ0192CEZZ	J	1000p2kV Ceramic	AB
C752	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C753	VCKYPA2HB102K	J	1000p500V Ceramic	AA
C754	VCEAGH1VW228M	J	2200 35V Electrolytic	AG
C755	VCEAGA1EW477M	J	470 25V Electrolytic	AD
C758	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C759	VCFYFA1HA334J	J	0.33 50V M. Polyester	AB
C760	VCE9GA1HW474M	J	0.47 50V Elect. (N.P)	AB

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CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C761	RC-EZ0069CEZZ	J	220 160V Electrolytic	AG
	or			
	VCEAGW2CW227M	J	220 160V Electrolytic	AK
C762	RC-EZ0069CEZZ	J	220 160V Electrolytic	AG
	or			
	VCEAGW2CW227M	J	220 160V Electrolytic	AK
C763	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C764	VCEAGA1CW108M	J	1000 16V Electrolytic	AD
C765	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C766	VCEAGA1CW477M	J	470 16V Electrolytic	AC
C767	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C768	VCEAGA1CW228M	J	2200 16V Electrolytic	AE
C769	VCKYPA2HB102K	J	1000p 500V Ceramic	AA
C770	VCEAGA2AW107M	J	100 100V Electrolytic	AD
C771	VCEAGA1HW337M	J	330 50V Electrolytic	AD
C772	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C773	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C775	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C776	VCEAGA1AW107M	J	100 10V Electrolytic	AB
C777	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1001	VCCSPA1HL680J	J	68p 50V Ceramic	AA
C1002	VCCSPA1HL181J	J	180p 50V Ceramic	AA
C1003	VCFYFA1HA334J	J	0.33 50V M. Polyester	AB
C1004	VCFYFA1HA334J	J	0.33 50V M. Polyester	AB
C1005	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C1006	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C1007	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C1009	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
C1010	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
C1011	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
C1013	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C1014	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C1015	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C1016	VCEAGA1CW336M	J	33 16V Electrolytic	AB
C1017	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C1018	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C1019	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C1020	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1021	VCEAGA1AW338M	J	3300 10V Electrolytic	AF
C1022	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C1024	VCEAGA1CW337M	J	330 16V Electrolytic	AC
C1027	VCEAGA0JW107M	J	100 6.3V Electrolytic	AB
C1028	VCCCPA1HH1R0C	J	1p 50V Ceramic	AA
C1029	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C1031	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C1032	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C1033	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1034	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1035	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1036	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1037	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1038	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R201	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R202	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R203	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R204	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R205	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R206	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R207	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R213	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R214	VRD-MN2BE105J	J	1M 1/8W Carbon	AA
R215	VRD-MN2BE105J	J	1M 1/8W Carbon	AA
R216	VRD-RA2BE155J	J	1.5M 1/8W Carbon	AA
R219	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R220	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R221	VRD-RA2BE334J	J	330k 1/8W Carbon	AA
R222	VRD-MN2BE824J	J	820k 1/8W Carbon	AA
R301	VRD-MN2BE124J	J	120k 1/8W Carbon	AA
R302	VRD-MN2BE154J	J	150k 1/8W Carbon	AA
R306	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R307	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R308	VRD-MN2BE000J	J	0 1/8W Carbon	AA
R309	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R310	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R311	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R351	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R352	VRD-MN2BE682J	J	6.8k 1/8W Carbon	AA
R353	VRD-MN2BE152J	J	1.5k 1/8W Carbon	AA
R354	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R355	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
⚠ R356	VRG-RF2EB560J	J	56 1/4W Fuse Resistor	AB
R357	VRD-MN2BE4R7J	J	4.7 1/8W Carbon	AA
R358	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R402	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R405	VRD-RA2BE750J	J	75 1/8W Carbon	AA
R406	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R407	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R408	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R409	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R410	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R411	VRD-MN2BE000J	J	0 1/8W Carbon	AA
R412	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R414	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R415	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R416	VRD-RM2HD471J	J	470 1/2W Carbon	AA
R419	VRD-MN2BE332J	J	3.3k 1/8W Carbon (VT-3700S)	AA
R421	*See Controls*			
R422	VRD-RA2EE564J	J	560k 1/4W Carbon	AA
R423	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R424	VRD-RA2BE272J	J	2.7k 1/8W Carbon (VT-3700S)	AA
R425	VRD-MN2BE333J	J	33k 1/8W Carbon	AA
⚠ R501	VRG-RL2HB3R3J	J	3.3 1/2W Fuse Resistor	AB
R502	VRD-MN2BE183J	J	18k 1/8W Carbon (VT-3700S)	AA

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RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R502	VRD-MN2BE273J	J	27k 1/8W Carbon (VT-5400S)	AA
R503	*See Controls*			
R504	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R508	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R509	VRD-MN2BE104J	J	100k 1/8W Carbon	AA
R510	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R511	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R512	VRD-RM2HD152J	J	1.5k 1/2W Carbon (VT-3700S)	AA
R512	VRD-RM2HD102J	J	1k 1/2W Carbon (VT-5400S)	AA
R513	VRD-RM2HD222J	J	2.2k 1/2W Carbon (VT-5400S)	AA
R514	VRS-VV3DB272J	J	2.7k 2W Metal Oxide (VT-3700S)	AA
R514	VRS-VV3DB681J	J	680 2W Metal Oxide (VT-5400S)	AA
R515	VRD-MN2BE393J	J	39k 1/8W Carbon	AA
R516	VRD-MN2BE273J	J	27k 1/8W Carbon	AA
R517	VRD-MN2BE183J	J	18k 1/8W Carbon	AA
R518	VRD-MN2BE333J	J	33k 1/8W Carbon	AA
R519	VRD-MN2BE181J	J	180 1/8W Carbon (VT-3700S)	AA
R519	VRD-MN2BE221J	J	220 1/8W Carbon (VT-5400S)	AA
R520	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R521	VRD-RM2HD3R9J	J	3.9 1/2W Carbon (VT-3700S)	AA
R521	VRD-RM2HD2R7J	J	2.7 1/2W Carbon (VT-5400S)	AA
⚠ R522	RR-XZ0035TAZZ	J	22 1/4W Fuse Resistor	AB
R523	VRD-RM2HD561J	J	560 1/2W Carbon	AA
R524	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R525	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R526	*See Controls*			
R527	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R528	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
⚠ R601	VRG-RL2HB5R6J	J	5.6 1/2W Fuse Resistor	AB
R602	VRD-RM2HD472J	J	4.7k 1/2W Carbon	AA
R603	VRS-SU2HB102J	J	1k 1/2W Metal Oxide	AA
R604	VRD-RA2EE393J	J	39k 1/4W Carbon	AA
R605	VRD-RA2EE124J	J	120k 1/4W Carbon	AA
R606	VRD-RA2EE564J	J	560k 1/4W Carbon	AA
R607	VRD-RA2EE394J	J	390k 1/4W Carbon	AA
R608	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
⚠ R609	VRG-RL2HB220J	J	22 1/2W Fuse Resistor	AB
R610	VRD-RA2EE103J	J	10k 1/4W Carbon (VT-3700S)	AA
R610	VRD-RA2EE272J	J	2.7k 1/4W Carbon (VT-5400S)	AA
⚠ R611	VRG-RF2EB3R3J	J	3.3 1/4W Fuse Resistor	AB

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R612	VRW-KX4AC220K	J	22 10W Cement (VT-3700S)	AE
R612	VRW-KQ41C220J	R	22 15W Cement (VT-5400S)	AF
R613	VRD-RA2EE223J	J	22k 1/4W Carbon	AA
⚠ R614	VRG-RL2HB181J	J	180 1/2W Fuse Resistor (VT-3700S)	AB
⚠ R614	VRG-RL2HB390J	J	39 1/2W Fuse Resistor (VT-5400S)	AB
R615	VRD-RM2HD151J	J	150 1/2W Carbon (VT-3700S)	AA
R615	VRD-RM2HD390J	J	39 1/2W Carbon (VT-5400S)	AA
R616	VRD-RM2HD222J	J	2.2k 1/2W Carbon	AA
R617	VRD-MN2BE331J	J	330 1/8W Carbon (VT-3700S)	AA
R617	VRD-MN2BE151J	J	150 1/8W Carbon (VT-5400S)	AA
R618	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R619	VRS-SV3DB272J	J	2.7k 2W Metal Oxide	AA
R620	VRS-SV3DB222J	J	2.2k 2W Metal Oxide (VT-3700S)	AB
R620	VRS-SV3DB272J	J	2.7k 2W Metal Oxide (VT-5400S)	AA
R621	VRD-RM2HD332J	J	3.3k 1/2W Carbon	AA
R622	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R623	VRN-VV3ABR56J	J	0.56 1W Metal Film (VT-3700S)	AA
R623	VRN-VV3DB1R8J	J	1.8 2W Metal Oxide (VT-5400S)	AA
R624	VRS-VV3AB562J	J	5.6k 1W Metal Oxide (VT-3700S)	AA
⚠ R701	RR-DZ0013CEZZ	J	3.3M Special	AD
⚠ R702	VRW-KX3NC6R8K	J	6.8 7W Cement	AD
⚠ R703	VRS-KT3LB223J	J	22K 3W Metal Oxide	AC
⚠ R704	VRS-KT3LB223J	J	22K 3W Metal Oxide	AC
⚠ R705	VRD-RM2HD101J	J	100 1/2W Carbon	AA
⚠ R706	VRD-RM2HD222J	J	2.2k 1/2W Carbon	AA
⚠ R707	VRD-RM2HD681J	J	680 1/2W Carbon	AA
⚠ R708	VRN-VV3ABR33J	J	0.33 1W Metal Film (VT-3700S)	AA
⚠ R708	VRN-VV3ABR27J	J	0.27 1W Metal Film (VT-5400S)	AA
⚠ R709	VRD-RM2HD222J	J	2.2k 1/2W Carbon	AA
⚠ R710	VRD-RM2HD392J	J	3.9k 1/2W Carbon	AA
⚠ R711	VRD-RM2HD472J	J	4.7k 1/2W Carbon	AA
⚠ R712	VRG-RL2HB3R9J	J	3.9 1/2W Fuse Resistor	AD
⚠ R714	VRS-KT3LB473J	J	47k 3W Metal Oxide	AE
⚠ R715	VRD-RA2BE681J	J	680 1/8W Carbon	AA
⚠ R720	VRC-UA2HG825K	J	8.2M 1/2W Solid	AA
⚠ R721	VRC-UA2HG825K	J	8.2M 1/2W Solid	AA
R751	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R752	VRD-RM2HD182J	J	1.8k 1/2W Carbon	AA
R754	VRD-RA2HD563G	J	56k 1/2W Carbon	AB
R755	VRD-RA2HD822G	J	8.2k 1/2W Carbon	AA

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RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R756	VRD-RA2HD564G	J	560k 1/2W Carbon	AB
R757	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R759	VRD-RA2BE561J	J	560k 1/8W Carbon	AA
⚠ R761	VRG-RL2HB1R0K	J	1 1/2W Fuse Resistor	AB
R762	VRS-VV3DB221J	J	220 2W Metal Oxide	AA
R764	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
R765	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R766	VRD-RA2BE823J	J	82k 1/8W Carbon	AA
R767	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R768	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R772	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R774	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R775	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R777	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R779	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R787	VRS-KT3LB101J	J	100 3W Metal Oxide	AC
R788	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1001	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1002	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1003	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1004	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R1005	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1006	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1007	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1008	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1009	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1010	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1011	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R1012	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1013	VRD-MN2BE122J	J	1.2k 1/8W Carbon	AA
R1014	VRD-MN2BE562J	J	5.6k 1/8W Carbon (VT-3700S)	AA
R1014	VRD-MN2BE822J	J	8.2k 1/8W Carbon (VT-5400S)	AA
R1015	VRD-MN2BE223J	J	22k 1/8W Carbon (VT-3700S)	AA
R1015	VRD-MN2BE103J	J	10k 1/8W Carbon (VT-5400S)	AA
R1016	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1017	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1018	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1019	VRD-MN2BE152J	J	1.5k 1/8W Carbon	AA
R1020	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA
R1025	VRD-MN2BE332J	J	3.3k 1/8W Carbon	AA
R1026	VRD-MN2BE272J	J	2.7k 1/8W Carbon	AA
R1027	VRD-MN2BE152J	J	1.5k 1/8W Carbon	AA
R1028	VRD-MN2BE562J	J	5.6k 1/8W Carbon	AA
R1029	VRD-MN2BE152J	J	1.5k 1/8W Carbon	AA
R1030	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1031	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R1032	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1034	VRD-RA2BE102J	J	1k 1/8W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1036	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R1037	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1038	VRD-RA2BE101J	J	100 1/8W Carbon (VT-5400S)	AA
R1040	VRD-RA2BE101J	J	100 1/8W Carbon (VT-5400S)	AA
R1040	VRD-RA2BE223J	J	22k 1/8W Carbon (VT-3700S)	AA
R1041	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1044	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1045	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1046	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1047	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1048	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1049	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1050	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1051	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1052	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1053	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R1054	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R1055	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1056	VRD-MN2BE151J	J	150 1/8W Carbon	AA
R1057	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R1058	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1059	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1060	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1061	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1062	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R1063	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1064	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1065	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1066	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1067	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1068	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1069	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1070	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1071	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1072	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1073	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1074	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1075	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1078	VRD-MN2BE000J	J	0 1/8W Carbon	AA
R1079	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1080	VRD-MN2BE000J	J	0 1/8W Carbon	AA
R1081	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1082	VRD-MN2BE000J	J	0 1/8W Carbon	AA
R1083	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1085	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1087	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1089	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1090	VRD-MN2BE102J	J	1k 1/8W Carbon (VT-3700S)	AA
R1091	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1092	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1093	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA

PWB-A DUNTK8300WEV3/V6
MOTHER UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1094	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1095	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1097	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1101	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1102	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
R1103	VRD-MN2BE101J	J	100 1/8W Carbon	AA
R1104	VRD-MN2BE223J	J	22k 1/8W Carbon	AA
⚠ R1105	VRG-RL2HB100J	J	10 1/2W Fuse Resistor	AB
R1106	VRD-MN2BE680J	J	68 1/8W Carbon	AA
R1108	VRD-MN2BE333J	J	33k 1/8W Carbon	AA
R1109	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1110	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1111	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1112	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1113	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1114	VRD-MN2BE273J	J	27k 1/8W Carbon	AA
R1115	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1116	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1117	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1121	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R1122	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1123	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1125	VRD-RA2BE101J	J	100 1/8W Carbon (VT-5400S)	AA
R1126	VRD-RA2BE125J	J	1.2M1/8W Carbon	AA
R1127	VRD-RA2BE102J	J	1k 1/8W Carbon	AA

RELAY AND SWITCHES

Ref. No.	Part No.	★	Description	Code
RY751	RRLYJ0012GEZZ	J	Power Relay	AH
S501	QSW-B0015CEZZ	J	Vertical Center Adj.	AC
⚠ S701	QSW-P0566CEZZ	J	Main Power Switch	AL

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
⚠ F701	QFS-C2026CEZZ	J	Fuse, T2AH	AE
⚠ F751	QFS-J2521GEZZ	J	IC Protector	AE
FB301	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB501	RBLN-0014GEZZ	J	Ferrite Bead	AB
FB601	RBLN-0037CEZZ	J	Ferrite Bead	AB
FB602	RBLN-0037CEZZ	J	Ferrite Bead	AB
⚠ FB701	RBLN-0010CEZZ	J	Ferrite Bead	AC
⚠ FB703	RBLN-0010CEZZ	J	Ferrite Bead	AC
⚠ FB704	RBLN-0009CEZZ	J	Ferrite Bead	AC
FB751	RBLN-0010CEZZ	J	Ferrite Bead	AC
FB753	RBLN-0010CEZZ	J	Ferrite Bead	AC
FH701	QFSHD1009CEZZ	J	Fuse Holder	AA
FH702	QFSHD1010CEZZ	J	Fuse Holder	AA

MISCELLANEOUS PARTS (Continued)

Ref. No.	Part No.	★	Description	Code
P201	QPLGN0341CE04	J	Plug 3-pin, TP201	AC
P301	QPLGN0241CEZZ	J	Plug 2-pin, (S)	AA
P401	QPLGN0878GEZZ	J	Plug 8-pin, (AD)	AC
P402	QPLGN0678GEZZ	J	Plug 6-pin, (AB)	AB
P403	QPLGN0541CEZZ	J	Plug 5-pin (VT-5400S)	AB
P404	QPLGN0341CEZZ	J	Plug 3-pin (VT-5400S)	AA
P405	QPLGN0441CEZZ	J	Plug 4-pin (VT-5400S)	AB
P501	QPLGN0505CEZZ	J	Plug 5-pin, (F)	AB
P701	QPLGN0304CEZZ	J	Plug 3-pin, (A)	AB
P702	QPLGN0207CEZZ	J	Plug 2-pin, (AA)	AA
P703	QPLGN0207CEZZ	J	Plug 2-pin, (BB)	AA
P704	QPLGN0207CEZZ	J	Plug 2-pin, (G)	AA
P751	QPLGN0678GEZZ	J	Plug 6-pin, (AE)	AB
P752	QPLGN0441CEZZ	J	Plug 4-pin, (H)	AB
P753	QPLGN0241CEZZ	J	Plug 2-pin (VT-5400S)	AA
P1005	QPLGN0878GEZZ	J	Plug 8-pin, (AF)	AC
P1006	QPLGN0478GEZZ	J	Plug 4-pin, (AG)	AB
P1007	QPLGN0778GEZZ	J	Plug 7-pin, (AL)	AC
P1008	QPLGN0478GEZZ	J	Plug 4-pin, (AC)	AB
SC1001	QSOCN0969CEZZ	J	Socket 9-piN, (Y1)	AC
SC1002	QSOCN0869CEZZ	J	Socket 8-pin, (Y2)	AC
SC1003	QSOCN0969CEZZ	J	Socket 9-pin, (Y3)	AC
SC1004	QSOCN0969CEZZ	J	Socket 9-pin, (Y4)	AC
	LHLDW1047PEZZ	R	Wire Holder, ×2	AB
	QTiPM0083CEZZ	J	Tip, (L5)	AB

—— End of PWB-A ——

PWB-B DUNTK8303WEV2/V6 CRT SOCKET UNIT

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q851	VS2SC2229O/1E	J	2SC2229(O), R-Output	AD
Q852	VS2SC2229O/1E	J	2SC2229(O), G-Output	AD
Q853	VS2SC2229O/1E	J	2SC2229(O), B-Output	AD

COIL

Ref. No.	Part No.	★	Description	Code
L851	VP-CF681K0000	J	Coil, 680μH	AB

CONTROLS

Ref. No.	Part No.	★	Description	Code
R853	RVR-B5411CEZZ	J	5k(B) Red Bias	AC
R857	RVR-B5410CEZZ	J	500(B) Green Drive	AC
R859	RVR-B5411CEZZ	J	5k(B) Green Bias	AC
R863	RVR-B5410CEZZ	J	500(B) Blue Drive	AC
R865	RVR-B5411CEZZ	J	5k(B) Blue Bias	AC

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C851	VCKYPA1HB271K	J	270p 50V Ceramic	AA
C852	VCKYPA1HB221K	J	220p 50V Ceramic (VT-3700S)	AA
C852	VCKYPA1HB181K	J	180p 50V Ceramic (VT-5400S)	AA
C853	VCKYPA1HB271K	J	270p 50V Ceramic	AA
⚠ C854	RC-KZ0177CEZZ	J	4700p 2kV Ceramic	AC
C855	VCEAGA2DW106M	J	10 200V Electrolytic	AC
C856	VCKYPA2HB121K	J	120p 500V Ceramic	AA
C899	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R851	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R853	*See Controls*			
R855	VRD-RM2HD272J	J	2.7k 1/2W Carbon (VT-3700S)	AA
R856	VRD-RA2BE271J	J	270 1/8W Carbon (VT-3700S)	AA
R856	VRD-RA2BE331J	J	330 1/8W Carbon (VT-5400S)	AA
R857	*See Controls*			
R859	*See Controls*			
R860	VRS-VV3DB153J	J	15k 2W Metal Oxide	AA
R861	VRD-RM2HD272J	J	2.7k 1/2W Carbon (VT-3700S)	AA
R862	VRD-RA2BE181J	J	180 1/8W Carbon (VT-3700S)	AA
R862	VRD-RA2BE391J	J	390 1/8W Carbon (VT-5400S)	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R863	*See Controls*			
R865	*See Controls*			
R866	VRS-VV3DB153J	J	15k 2W Metal Oxide	AA
R867	VRD-RM2HD272J	J	2.7k 1/2W Carbon	AA
R868	VRS-VV3DB153J	J	15k 2W Metal Oxide	AA
R869	VRD-RM2HD272J	J	2.7k 1/2W Carbon (VT-5400S)	AA
R870	VRD-RM2HD272J	J	2.7k 1/2W Carbon (VT-5400S)	AA
R899	VRD-RA2BE100J	J	10 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
FB851	RBLN-0037CEZZ	J	Ferrite Bead	AB
P851	QPLGN0441CEZZ	J	Plug 4-pin, (H)	AB
P852	QPLGN0541CEZZ	J	Plug 5-pin, (K)	AB
⚠ SC851	QSOCV0829CEZZ	J	CRT Socket (VT-3700S)	AK
⚠ SC851	QSOCV0913CEZZ	J	CRT Socket (VT-5400S)	AK
SC852	QTiPM0083CEZZ	J	Tip	AB

—— **End of PWB-B** ——

Ref. No.	Part No.	★	Description	Code

PWB-D DUNTK8302WEV2/V6
POWER SW, R/C UNIT

CAPACITOR

C3001	VCEAGA1AW107M	J	100 10V Electrolytic	AB

RESISTORS

R3001	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R3002	VRD-MN2BE470J	J	47 1/8W Carbon	AA

SWITCH

⚠ S3001	QSW-K0114CEZZ	J	Power Switch	AE

MISCELLANEOUS PARTS

P3001	QPLGN0478GEZZ	J	Plug 4-pin, (AC)	AB
RMC3001	RRMCU0207CEZZ	J	Remote Control Receiver	AM
	QCNW-1617PEZZ	R	Connecting Wire, (AC) (VT-3700S)	AF
	QCNW-1644PEZZ	R	Connecting Wire, (AC) (VT-5400S)	AF

—— End of PWB-D ——

PWB-F DUNTK8373WEV2/V6
LINE FILTER UNIT

COIL

⚠ L1701	RCiLF0105CEZZ	J	Coil, Line Filter	AP
⚠ L1702	RCiLF0105CEZZ	J	Coil, Line Filter	AP

CAPACITOR

⚠ C1702	RC-FZ016SGEZZ	J	0.47 AC250V M.Polyester	AK

MISCELLANEOUS PARTS

P1701	QPLGN0207CEZZ	J	Plug 2-pin, (AA)	AA
P1702	QPLGN0207CEZZ	J	Plug 2-pin, (BB)	AA
	QCNW-1615PEZZ	R	Connecting Wire, (AA)	AG
	QCNW-1637PEZZ	R	Connecting Wire, (BB)	AH

—— End of PWB-F ——

Ref. No.	Part No.	★	Description	Code

PWB-Y DUNTK8301WEV2/V6
VCJ, A/V UNIT

INTEGRATED CIRCUITS

IC1301	RH-iX0257CEZZ	J		AF
IC1801	RH-iX0969CEN1	J	TA8659AN, Video/Chroma/Jungle	BA

TRANSISTORS

Q1302	VS2SC1815GW-1	J	2SC1815(G), S-Mute	AB
Q1303	VS2SC1815GW-1	J	2SC1815(G)	AB
Q1304	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q1402	VS2SA1015Y/1E	J	2SA1015(Y), Picture Amp.	AC
Q1403	VS2SA1015Y/1E	J	2SA1015(Y), Current Source	AC
Q1405	VS2SC3399//-1	J	2SC3399, Blue Mute Sw.	AB
Q1451	VS2SC1815GW-1	J	2SC1815(G), Video Amp.	AB
Q1452	VS2SC1815GW-1	J	2SC1815(G)	AB
Q1453	VS2SC1815GW-1	J	2SC1815(G)	AB
Q1454	VS2SC1815GW-1	J	2SC1815(G)	AB
Q1455	VS2SA1015Y/1E	J	2SA1015(Y)	AC
Q1602	VS2SC3399//-1	J	2SC3399, Blue Switch	AB

DIODES

D1301	VHD1SS119//1E	J	1SS119	AA
D1304	RH-EX0045TAZZ	J	Zener Diode	AB
D1305	RH-EX0045TAZZ	J	Zener Diode	AB
D1404	VHD1SS119//1E	J	1SS119	AA
D1405	VHD1SS119//1E	J	1SS119	AA
D1406	VHD1SS119//1E	J	1SS119	AA
D1407	VHD1SS119//1E	J	1SS119	AA
D1409	VHD1SS119//1E	J	1SS119	AA
D1451	RH-EX0030GEZZ	J	Zener Diode	AB
D1501	RH-EX0384GEZZ	J	Zener Diode	AA
D1506	RH-EX0395GEZZ	J	Zener Diode, 9V	AA
D1601	RH-EX0200CEZZ	J	Zener Diode	AB
D1602	RH-EX0395GEZZ	J	Zener Diode, 9V	AA
D1603	RH-EX0395GEZZ	J	Zener Diode, 9V	AA
D1802	RH-EX0395GEZZ	J	Zener Diode, 9V	AA
D1803	VHD1SS119//1E	J	1SS119	AA
D1805	RH-EX0200CEZZ	J	Zener Diode	AB
D1806	RH-EX0200CEZZ	J	Zener Diode	AB
D1807	RH-EX0200CEZZ	J	Zener Diode	AB
D1851	RH-EX0147CEZZ	J	Zener Diode	AC
D1852	RH-EX0147CEZZ	J	Zener Diode	AC
D1853	RH-EX0147CEZZ	J	Zener Diode	AC
D1854	RH-EX0147CEZZ	J	Zener Diode	AC

PACKAGED CIRCUIT

X1801	RCRSB0067CEZZ	J	Crystal, 4.43 MHz	AQ

PWB-Y DUNTK8301WEV2/V6
VCJ, A/V UNIT

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
CF1601	RFiLA0005CEZZ	J	Ceramic Filter, 503kHz	AE
DL1401	RCiLZ0556CEZZ	J	Delay Line, Video Delay	AG
DL1801	RCiLZ0475CEZZ	J	Delay Line	AP
L1302	VP-DF3R3K0000	J	Coil, 3.3µH	AB
L1303	VP-DF3R3K0000	J	Coil, 3.3µH	AB
L1304	VP-DF3R3K0000	J	Coil, 3.3µH	AB
L1305	VP-DF220K0000	J	Coil, 22µH	AB
L1306	VP-CF3R3K0000	J	Coil, 3.3µH	AB
L1401	VP-XF101K0000	J	Coil, 100µH	AB
L1402	VP-DF101K0000	J	Coil, 100µH (VT-3700S)	AB
L1402	VP-DF220K0000	J	Coil, 22µH (VT-5400S)	AB
L1404	VP-XF470K0000	J	Coil, 47µH	AB
L1451	VP-DF3R3K0000	J	Coil, 3.3µH	AB
L1452	VP-XF4R7K0000	J	Coil, 4.7µH	AB
L1453	VP-XF4R7K0000	J	Coil, 4.7µH	AB
L1454	VP-DF121K000	J	Coil, 120µH	AB
L1455	VP-DF220K0000	J	Coil, 22µH	AB
L1801	VP-DF8R2K0000	J	Coil, 8.2µH	AB
L1802	VP-DF270K0000	J	Coil, 27µH	AB
T1801	RCiLZ0511CEZZ	J	1H DL Matching Coil	AD

CONTROLS

Ref. No.	Part No.	★	Description	Code
R1425	RVR-M4626GEZZ	J	10k(B) Sub-Brightness	AB
R1602	RVR-M4614GEZZ	J	100(B) Horiz. Center	AB
R1802	RVR-M4628GEZZ	J	22k(B) Sub-Colour	AB
R1806	RVR-M4620GEZZ	J	1k(B) DL-Amp.	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C1301	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1302	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1303	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C1304	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C1305	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C1306	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C1307	VCKYMN1HB102K	J	1000p50V Ceramic	AA
C1309	VCKYMN1HB102K	J	1000p50V Ceramic (VT-3700S)	AA
C1309	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1310	VCKYPA1HB221K	J	220p 50V Ceramic (VT-3700S)	AA
C1311	VCKYMN1HB102K	J	1000p50V Ceramic (VT-3700S)	AA
C1311	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1312	VCEAGA1HW104M	J	0.1 50V Electrolytic	AA
C1313	VCKYMN1CY103N	J	0.01 16V Ceramic	AA

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C1314	VCKYPA1HB102K	J	1000p50V Ceramic	AA
C1315	VCKYPN1HB102K	J	1000p50V Ceramic (VT-3700S)	AA
C1317	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1401	VCE9GA1CW106M	J	10 16V Elect. (N.P)	AB
C1403	VCCCPA1HH560J	J	56p 50V Ceramic	AA
C1404	VCKYMN1HB102K	J	1000p50V Ceramic	AA
C1405	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C1406	VCEAGA1HW106M	J	10 50V Electrolytic	AC
C1407	VCEAGA0JW107M	J	100 6.3V Electrolytic	AB
C1408	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C1409	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C1410	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
C1411	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C1412	VCEAGA1HW224T	J	0.22 50V Electrolytic	AB
C1413	VCEAGA1HW224T	J	0.22 50V Electrolytic	AB
C1414	VCEAGA1HW224T	J	0.22 50V Electrolytic	AB
C1415	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1416	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C1417	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C1421	VCEAGA1CW476M	J	47 16V Electrolytic (VT-3700S)	AB
C1421	VCEAGA1CW106M	J	10 16V Electrolytic (VT-5400S)	AA
C1422	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C1423	VCKYPA1HF103Z	J	0.01 16V Ceramic	AA
C1451	VCEAGA1CW108M	J	1000 16V Electrolytic	AD
C1452	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1453	VCEAGA0JW477M	J	470 6.3V Electrolytic	AB
C1456	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C1457	VCKYMN1HB102K	J	1000p50V Ceramic	AA
C1458	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1459	VCE9GA1CW226M	J	22 16V Elect. (N.P)	AB
C1460	VCCCMN1HH100J	J	10p 50V Ceramic	AA
C1461	VCCSMN1HL390J	J	39p 50V Ceramic	AA
C1463	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1510	VCSATA1VE225K	J	2.2 35V Tantalum	AC
C1601	VCQYTA1HM223J	J	0.022 50V Mylar	AA
C1602	VCQYTA1HM333J	J	0.033 50V Mylar	AA
C1603	VCQYTA1HM223J	J	0.022 50V Mylar	AA
C1604	VCEAGA1HW225M	J	2.2 50V Electrolytic	AB
C1605	VCKYPA1HB471K	J	470p 50V Ceramic	AA
C1606	VCCCPA1HH121J	J	120p 50V Ceramic	AA
C1607	VCQYTA1HM333J	J	0.033 50V Mylar	AA
C1612	VCCCPA1HH101J	J	100p 50V Ceramic	AA
C1614	VCE9GA1HW105M	J	1 50V Elect. (N.P)	AB
C1629	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C1630	VCEAGA1CW477M	J	470 16V Electrolytic	AC
C1801	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C1802	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1803	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1804	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
C1805	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1806	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1808	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA

PWB-Y DUNTK8301WEV2/V6 VCJ, A/V UNIT

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C1809	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1811	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C1812	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C1813	VCQYTA1HM563J	J	0.056 50V Mylar	AB
C1814	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C1815	VCE9GA1HW105M	J	1 50V Elect. (N.P)	AB
C1816	VCCCPA1HH220J	J	22p 50V Ceramic	AA
C1817	VCCCPA1HH330J	J	33p 50V Ceramic	AA
C1822	VCCSMN1HL220J	J	22p 50V Ceramic	AA
C1823	VCCSMN1HL220J	J	22p 50V Ceramic	AA
C1824	VCCSMN1HL220J	J	22p 50V Ceramic	AA
C1825	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C1827	VCCSPA1HL181J	J	180p 50V Ceramic	AA
C1828	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1829	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA
C1830	VCKYMN1HB181K	J	180p 50V Ceramic	AA
C1831	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C1832	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1834	VCCCMN1HH100J	J	10p 50V Ceramic	AA
C1836	VCEAGA1CW227M	J	220 16V Electrolytic	AC
C1840	VCKYMN1CY103N	J	0.01 16V Ceramic	AA
C1842	VCQYTA1HM104J	J	0.1 50V Mylar	AA
C1901	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R1301	VRD-MN2BE183J	J	18k 1/8W Carbon	AA
R1302	VRD-MN2BE273J	J	27k 1/8W Carbon	AA
R1305	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1306	VRD-MN2BE183J	J	18k 1/8W Carbon	AA
R1307	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1308	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1309	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1310	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1311	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1312	VRD-MN2BE273J	J	27k 1/8W Carbon	AA
R1313	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1314	VRD-MN2BE272J	J	2.7k 1/8W Carbon	AA
R1315	VRD-MN2BE104J	J	100k 1/8W Carbon	AA
R1316	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1317	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1318	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R1323	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R1324	VRD-RA2BE563J	J	56k 1/8W Carbon	AA
R1325	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1401	VRD-MN2BE331J	J	330 1/8W Carbon	AA
R1402	VRD-MN2BE152J	J	1.5k 1/8W Carbon	AA
R1403	VRD-MN2BE821J	J	820 1/8W Carbon (VT-3700S)	AA
R1403	VRD-MN2BE681J	J	680 1/8W Carbon (VT-5400S)	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1404	VRD-MN2BE821J	J	820 1/8W Carbon (VT-3700S)	AA
R1404	VRD-MN2BE122J	J	1.2k 1/8W Carbon (VT-5400S)	AA
R1407	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1408	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1409	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1413	VRD-RA2BE223J	J	22k 1/8W Carbon	AA
R1414	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1415	VRD-MN2BE821J	J	820 1/8W Carbon	AA
R1416	VRD-MN2BE272J	J	2.7k 1/8W Carbon	AA
R1417	VRD-MN2BE683J	J	68k 1/8W Carbon	AA
R1418	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1424	VRD-MN2BE123J	J	12k 1/8W Carbon	AA
R1426	VRD-MN2BE823J	J	82k 1/8W Carbon	AA
R1428	VRD-RA2BE272J	J	2.7k 1/8W Carbon (VT-5400S)	AA
R1429	VRD-MN2BE124J	J	120k 1/8W Carbon	AA
R1430	VRD-RM2HD471J	J	470 1/2W Carbon	AA
R1431	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1432	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1433	VRD-MN2BE272J	J	2.7k 1/8W Carbon	AA
R1434	VRD-MN2BE821J	J	820 1/8W Carbon	AA
R1435	VRD-MN2BE272J	J	2.7k 1/8W Carbon	AA
R1436	VRD-MN2BE821J	J	820 1/8W Carbon	AA
R1437	VRD-MN2BE103J	J	10k 1/8W Carbon (VT-3700S)	AA
R1452	VRD-MN2BE183J	J	18k 1/8W Carbon	AA
R1453	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1454	VRD-RM2HD181J	J	180 1/2W Carbon	AA
R1455	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R1456	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1457	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R1458	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R1459	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1460	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R1462	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1463	VRD-MN2BE104J	J	100k 1/8W Carbon	AA
R1464	VRD-MN2BE473J	J	47k 1/8W Carbon	AA
R1466	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1468	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1471	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1472	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R1473	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1474	VRD-MN2BE821J	J	820 1/8W Carbon	AA
R1501	VRD-MN2BE682J	J	6.8k 1/8W Carbon	AA
R1601	VRD-MN2BE471J	J	470 1/8W Carbon	AA
R1603	VRD-MN2BE332J	J	3.3k 1/8W Carbon	AA
R1604	VRD-MN2BE103J	J	10k 1/8W Carbon	AA
R1605	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R1606	VRD-MN2BE182J	J	1.8k 1/8W Carbon	AA
R1607	VRD-MN2BE224J	J	220k 1/8W Carbon	AA
R1608	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R1609	VRD-RA2EE101J	J	100 1/4W Carbon	AA
R1616	VRD-MN2BE681J	J	680 1/8W Carbon	AA

PWB-Y DUNTK8301WEV2/V6
VCJ, A/V UNIT

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R1641	VRD-MN2BE561J	J	560 1/8W Carbon	AA
R1801	VRD-MN2BE682J	J	6.8k 1/8W Carbon	AA
R1803	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1804	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1805	VRD-MN2BE391J	J	390 1/8W Carbon	AA
R1807	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1809	VRD-MN2BE334J	J	330k 1/8W Carbon	AA
R1810	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1813	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1814	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1815	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1816	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1817	VRD-MN2BE102J	J	1k 1/8W Carbon	AA
R1819	VRD-RA2EE475J	J	4.7M 1/4W Carbon	AA
R1820	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R1821	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R1822	VRD-MN2BE392J	J	3.9k 1/8W Carbon	AA
R1824	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1825	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1826	VRD-MN2BE221J	J	220 1/8W Carbon	AA
R1828	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1830	VRD-MN2BE561J	J	560 1/8W Carbon	AA
R1831	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1832	VRD-MN2BE561J	J	560 1/8W Carbon	AA
R1833	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1835	VRD-MN2BE822J	J	8.2k 1/8W Carbon	AA
R1836	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1837	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R1840	VRD-MN2BE153J	J	15k 1/8W Carbon	AA
R1848	VRD-MN2BE222J	J	2.2k 1/8W Carbon	AA
R1849	VRD-MN2BE472J	J	4.7k 1/8W Carbon	AA
R1851	VRD-RA2EE820J	J	82 1/4W Carbon	AA
R1852	VRD-MN2BE471J	J	470 1/8W Carbon	AA
R1853	VRD-RA2EE820J	J	82 1/4W Carbon	AA
R1854	VRD-MN2BE471J	J	470 1/8W Carbon	AA
R1855	VRD-RA2EE820J	J	82 1/4W Carbon	AA
R1856	VRD-MN2BE152J	J	1.5k 1/8W Carbon	AA
R1857	VRD-RA2EE750J	J	75 1/4W Carbon	AA
R1858	VRD-MN2BE471J	J	470 1/8W Carbon	AA

SWITCH

Ref. No.	Part No.	★	Description	Code
⚠S1401	QSW-B0015CEZZ	J	Service Switch	AC

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P1001	QPLGN0962CEZZ	J	Plug 9-pin, (Y1)	AC
P1002	QPLGN0862CEZZ	J	Plug 8-pin, (Y2)	AC
P1003	QPLGN0962CEZZ	J	Plug 9-pin, (Y3)	AC
P1004	QPLGN0962CEZZ	J	Plug 9-pin, (Y4)	AC
P1005	QPLGN0541CEZZ	J	Plug 5-pin, (K)	AB
⚠SC1401	QSOCZ2101CEZZ	J	Socket 21-pin	AH
	LHLDW1037PEZZ	R	Wire Holder, ×1	AB
FB1401	RBLN-0014GEZZ	J	Ferrite Bead	AB
FB1501	RBLN-0020CEZZ	J	Ferrite Bead (VT-3700S)	AB
FB1501	RBLN-0037CEZZ	J	Ferrite Bead (VT-5400S)	AB

—— End of PWB-Y ——

PWB-T DUNTK8407WEV2 (VT-5400S)
TEXT UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC2401	VHiCF72306/-1	J	TEXT	AR
IC2402	VHiTA7805S/-1	J	5V Regulator	AD
IC2801	VHiCF70200/-1	J	TEXT	BG
IC2802	VHiX24C02//-1	J	EEPROM	AN

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q2401	VS2SC1815GW-1	J	2SC1815(G)	AB
Q2402	VS2SC1815GW-1	J	2SC1815(G)	AB
Q2403	VS2SC1815GW-1	J	2SC1815(G)	AB

DIODES

Ref. No.	Part No.	★	Description	Code
D2801	VHD1SS119//1E	J	1SS119	AA
D2802	VHD1SS119//1E	J	1SS119	AA
D2803	VHD1SS119//1E	J	1SS119	AA
D2804	VHD1SS119//1E	J	1SS119	AA
D2805	VHD1SS119//1E	J	1SS119	AA

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
X2401	RCRSB0099CEZZ	J	Crystal, 13.875 MHz	AH

PWB-T DUNTK8407WEV2 (VT-5400S)
TEXT UNIT (Continued)

COILS

Ref. No.	Part No.	★	Description	Code
L2401	VP-DF100K0000	J	Coil, 10μH	AB
L2801	VP-DF100K0000	J	Coil, 10μH	AB

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C2401	VCQYTA1HM103J	J	0.01 50V Mylar	AA
C2402	VCCSPA1HL221J	J	220p 50V Ceramic	AA
C2403	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C2404	VCCCPA1HH150J	J	15p 50V Ceramic	AA
C2405	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2406	VCCSPA1HL221J	J	220p 50V Ceramic	AA
C2407	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C2408	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C2409	VCEAGA1AW107M	J	100 10V Electrolytic	AB
C2410	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2411	VCEAGA1HW334M	J	0.33 50V Electrolytic	AA
C2801	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C2802	VCFYHA1HA104J	J	0.1 50V M. Polyester	AB
C2803	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2804	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2805	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R2401	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2402	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2403	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2405	VRD-RA2BE821J	J	820 1/8W Carbon	AA
R2406	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2407	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2408	VRD-RA2BE123J	J	12k 1/8W Carbon	AA
R2409	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA
R2410	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2411	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2412	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R2801	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2803	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2804	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2805	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2806	VRD-RA2BE471J	J	470 1/8W Carbon	AA
R2807	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2808	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2809	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R2810	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R2812	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R2813	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P2401	QPLGN0541CEZZ	J	Plug 5-pin, (TA)	AB
P2402	QPLGN0941CEZZ	J	Plug 9-pin, (TB)	AC
	QCNW-1673PEZZ	R	Connecting Wire, (TA)	AH
	QCNW-1674PEZZ	R	Connecting Wire, (TB)	AK

—— End of PWB-T ——

PWB-C DUNTK4811TEV3/V5
Y/C UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC2201	VHiHA8285BF-1	J	Y/C Processor	AW
IC2202	VHiMSM7401R-1	J	1H Delay	AG

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q2201	VS2SA1037KQ-1	J	2SA1037K(Q)	AA
Q2202	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q2203	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q2213	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q2218	VS2SA1037KQ-1	J	2SA1037K(Q)	AA
Q2219	VS2C1740SQR1E	J	2SC1740S(Q.R)	AC

DIODES

Ref. No.	Part No.	★	Description	Code
D2201	VHD1SS119//-1	J	1SS119	AB
D2205	VHD1SS119//-1	J	1SS119	AB
D2206	VHD1SS119//-1	J	1SS119	AB

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
X5501	RCRSB0168GEZZ	J	Crystal, 4.43 MHz	AF

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
DL5501	RCiLZ0340GEZZ	J	Delay Line	AM
FL5501	RCiLF0245GEZZ	J	Filter, VCO	AD
L2202	VP-XF151K0000	J	Coil, 150μH	AB
L2203	VP-XF120K0000	J	Coil, 12μH	AB
L2204	VP-XF330K0000	J	Coil, 33μH	AB
L2205	VP-XF120K0000	J	Coil, 12μH	AB
L2209	VP-XF151K0000	J	Coil, 150μH	AB
L2210	VP-XF560K0000	J	Coil, 56μH	AB
L2211	VP-XF820K0000	J	Coil, 82μH	AB
L2212	VP-XF100K0000	J	Coil, 10μH	AB
L2216	VP-XF1R2K0000	J	Coil, 1.2μH	AB

PWB-C DUNTK4811TEV3/V5
Y/C UNIT (Continued)

COIL AND TRANSFORMERS (Continued)

Ref. No.	Part No.	★	Description	Code
L2217	VP-XF560K0000	J	Coil, 56µH	AB
L2218	VP-XF101K0000	J	Coil, 100µH	AB
L5503	VP-XF181K0000	J	Coil, 180µH	AB
L5504	VP-MK561K0000	J	Coil, 560µH	AB
L5509	VP-XF180K0000	J	Coil, 18µH	AB
L5513	VP-XF100K0000	J	Coil, 10µH	AB

CONTROLS

Ref. No.	Part No.	★	Description	Code
R2201	RVR-M4417GEZZ	J	22k(B) PB-Y Level	AB
R2202	RVR-M4417GEZZ	J	22k(B) EE Level	AB
R2203	RVR-M4417GEZZ	J	22k(B) White Clip	AB
R2204	RVR-M4415GEZZ	J	10k(B) Deviation	AB
R2205	RVR-M4374GEZZ	J	22k(B) Carrier	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C2201	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C2202	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C2203	VCKYCY1HB391K	J	390p 50V Ceramic	AA
C2204	VCCCCY1HH150J	J	15p 50V Ceramic	AA
C2205	VCCCCY1HH330J	J	33p 50V Ceramic	AA
C2206	VCCCCY1HH330J	J	33p 50V Ceramic	AA
C2207	VCCSD41HL560J	J	56p 50V Ceramic	AA
C2208	VCCCPA1HH820J	J	82p 50V Ceramic	AA
C2216	VCKYPA1HF103Z	J	0.01 50V Ceramic	AA
C2217	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C2218	VCKYCY1HB391K	J	390p 50V Ceramic	AA
C2221	VCCCCY1HH820J	J	82p 50V Ceramic	AA
C2222	VCKYCY1HB471K	J	470p 50V Ceramic	AA
C2223	VCCCCY1HH470J	J	47p 50V Ceramic	AA
C2224	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2225	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2227	RC-KZ0017GEZZ	J	0.047 50V Ceramic	AA
C2228	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C2229	VCEAEA1CW336M	J	33 16V Electrolytic	AB
C2230	VCCCCY1HH330J	J	33p 50V Ceramic	AA
C2232	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB
C2233	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2234	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA
C2235	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2236	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C2237	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2245	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C2246	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2247	VCCCCY1HH330J	J	33p 50V Ceramic	AA
C2248	VCCCCY1HH5R0C	J	5p 50V Ceramic	AA
C2249	VCCCCY1HH560J	J	56p 50V Ceramic	AA
C2250	VCEAGA1HW475M	J	4.7 50V Electrolytic	AB

CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C2251	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2252	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C2253	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C2254	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C2255	VCCCCY1HH820J	J	82p 50V Ceramic	AA
C2257	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2259	VCCCCY1HH470J	J	47p 50V Ceramic	AA
C2260	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA
C2261	VCKYCY1HB391K	J	390p 50V Ceramic	AA
C2262	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C2263	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2264	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2266	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2267	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C2272	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2273	VCKYCY1HB681K	J	680p 50V Ceramic	AA
C2274	VCCCCY1HH101J	J	100p 50V Ceramic	AA
C2280	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C2281	VCE9EA1CW226M	J	22 16V Elect. (N.P)	AC
C2284	VCCCCY1HH470J	J	47p 50V Ceramic	AA
C2285	VCCCCY1HH100D	J	10p 50V Ceramic	AA
C5501	VCEAGA1AW476M	J	47 10V Electrolytic	AA
C5502	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5503	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5507	VCKYCY1HB332K	J	3300p 50V Ceramic	AA
C5509	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5512	VCKYCY1HF333Z	J	0.033 50V Ceramic	AA
C5513	VCKYCY1HB332K	J	3300p 50V Ceramic	AA
C5515	VCCSPA1HL271J	J	270p 50V Ceramic	AA
C5517	VCCCCY1HH100D	J	10p 50V Ceramic	AA
C5518	VCCCCY1HH330J	J	33p 50V Ceramic	AA
C5519	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5523	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5528	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5529	VCCCPA1HH4R0C	J	4p 50V Ceramic	AA
C5530	VCCCCY1HH390J	J	39p 50V Ceramic	AA
C5534	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5543	VCKYCY1EF104Z	J	0.1 25V Ceramic	AA
C5546	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C5547	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C5559	VCKYCY1HF223Z	J	0.022 50V Ceramic	AB
C5560	VCEAEA1HW104M	J	0.1 50V Electrolytic	AB
C5565	VCCCCY1HH680J	J	68p 50V Ceramic	AA
C5566	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C5567	VCEAGA1HW474M	J	0.47 50V Electrolytic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R2201	*See Controls*			
R2202	*See Controls*			
R2203	*See Controls*			
R2204	*See Controls*			
R2205	*See Controls*			
R2207	VRD-RA2BE681J	J	680 1/8W Carbon	AA

PWB-C DUNTK4811TEV3/V5 Y/C UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R2208	VRD-RA2BE333J	J	33k 1/8W Carbon	AA
R2209	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R2210	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R2211	VRS-CY1JF392J	J	3.9k 1/16W Metal Oxide	AA
R2212	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R2213	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R2214	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R2215	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R2216	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide	AA
R2217	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R2231	VRS-CY1JF222J	J	2.2k 1/16W Metal Oxide	AA
R2232	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R2233	VRS-CY1JF822J	J	8.2k 1/16W Metal Oxide	AA
R2234	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R2235	VRS-CY1JF153J	J	15k 1/16W Metal Oxide	AA
R2236	VRS-CY1JF471J	J	470 1/16W Metal Oxide	AA
R2238	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R2242	VRS-CY1JF822J	J	8.2k 1/16W Metal Oxide	AA
R2243	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R2244	VRS-CY1JF681J	J	680 1/16W Metal Oxide	AA
R2246	VRS-CY1JF222J	J	2.2k 1/16W Metal Oxide	AA
R2247	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R2248	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R2249	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R2257	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R2258	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R2259	VRS-CY1JF391J	J	390 1/16W Metal Oxide	AA
R2260	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R2265	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R2267	VRS-CY1JF222J	J	2.2k 1/16W Metal Oxide	AA
R2268	VRS-CY1JF272J	J	2.7k 1/16W Metal Oxide	AA
R2269	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R2270	VRS-CY1JF272J	J	2.7k 1/16W Metal Oxide	AA
R2271	VRS-CY1JF474J	J	470k 1/16W Metal Oxide	AA
R2272	VRS-CY1JF681J	J	680 1/16W Metal Oxide	AA
R2273	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R2274	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R2280	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R2281	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R2282	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R2283	VRS-CY1JF471J	J	470 1/16W Metal Oxide	AA
R2284	VRS-CY1JF221J	J	220 1/16W Metal Oxide	AA
R2287	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R2288	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R2289	VRD-RA2BE154J	J	150k 1/8W Carbon	AA
R5502	VRS-CY1JF471J	J	470 1/16W Metal Oxide	AA
R5503	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R5507	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R5513	VRS-CY1JF272J	J	2.7k 1/16W Metal Oxide	AA
R5518	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide	AA
R5519	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R5530	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R5531	VRS-CY1JF221J	J	220 1/16W Metal Oxide	AA
R5532	VRS-CY1JF271J	J	270 1/16W Metal Oxide	AA
R5533	VRS-CY1JF122J	J	1.2k 1/16W Metal Oxide	AA
R5544	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R5562	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R5580	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R5581	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R5582	VRS-CY1JF391J	J	390 1/16W Metal Oxide	AA
R5583	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R5590	VRD-RA2BE681J	J	680 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
	QPLGN0473GEZZ	J	Plug 4-pin, TP2201~2204	AC
	QPLGN0273GEZZ	J	Plug 2-pin, TP2205~2206	AA
	QPLGN0252GEZZ	J	Plug 2-pin, TP5501~5502	AA
SC2201	QSOCN0779GEZZ	J	Socket 7-pin, (CA)	AC
SC2202	QSOCN0779GEZZ	J	Socket 7-pin, (CB)	AC
SC2203	QSOCN0579GEZZ	J	Socket 5-pin, (CC)	AC
SC2204	QSOCN0579GEZZ	J	Socket 5-pin, (CD)	AC
SC2205	QSOCN1070REZZ	J	Socket 10-pin, (CE)	AB

—— End of PWB-C ——

PWB-E DUNTK4810TEV3/V5 VCR MAIN UNIT

INTEGRATED CIRCUITS

Ref. No.	Part No.	★	Description	Code
IC6601	VHiBA7795LS-1	J	Audio REC/PB Amp.	AG
IC7701	VHiBA15218F1E	J	Capstan Motor and Drum Motor Control	AF
IC8801	RH-iX2522CEZZ	R	System Control Drum, Capstan Servo	BA
IC8802	VHiPST529D2-1	J	Reset	AD
IC8803	VHiBA6209//1E	J	Loading Motor Driver	AG
IC9901	VHiNJM29L05-1	J	NJM2930L05, AT 5V Generator	AE

TRANSISTORS

Ref. No.	Part No.	★	Description	Code
Q2301	VS2SA933SQR1E	J	2SA933S(Q,R)	AB
Q2302	VSDTA124EK/-1	J	DTA124EK	AB
Q6601	VS2C1740SQR1E	J	2SC1740S(Q,R)	AC
Q6602	VS2C1740SQR1E	J	2SC1740S(Q,R)	AC
Q6603	VS2SD1812Q/-1	J	2SD1812(Q)	AC
Q6606	VSDTA124ES/-1	J	DTA124ES	AB

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VCR MAIN UNIT (Continued)

TRANSISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
Q6607	VS2SD655-DE1E	J	2SD655(D,E)	AC
Q7701	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q7704	VS2SA933SQR1E	J	2SA933S(Q,R)	AB
Q7706	VS2SA1037KQ-1	J	2SA1037K(Q)	AA
Q7707	VS2SA1037KQ-1	J	2SA1037K(Q)	AA
Q8801	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q8802	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q8803	VS2SC2001LK-1	J	2SC2001	AA
Q8809	VS2SC2412KQ-1	J	2SC2412K(Q)	AA
Q9901	VSDTC144ES/-1	J	DTC144ES	AB
Q9903	VS2SC1827//2E	J	2SC1827(G,B)	AF
Q9904	VSDTC144ES/-1	J	DTC144ES	AB
Q9905	VS2SA950-Y/1E	J	2SA950(Y)	AD
Q9906	VSDTC144ES/-1	J	DTC144ES	AB
Q9907	VS2SA950-Y/1E	J	2SA950(Y)	AD

DIODES

Ref. No.	Part No.	★	Description	Code
D7701	VHD1SS119//-1	J	1SS119	AB
D7702	VHD1SS119//-1	J	1SS119	AB
D7703	VHD1SS119//-1	J	1SS119	AB
D7704	VHD1SS119//-1	J	1SS119	AB
D7705	VHD1SS119//-1	J	1SS119	AB
D7706	VHD1SS119//-1	J	1SS119	AB
D7707	VHD1SS119//-1	J	1SS119	AB
D7708	VHD1A3-F///-1	J		AA
	or			
	RH-DX0052GEZZ	J		AB
D8801	VHD1SS119//-1	J	1SS119	AB
D8802	VHD1SS119//-1	J	1SS119	AB
D8804	VHD1SS119//-1	J	1SS119	AB
D8805	VHD1SS119//-1	J	1SS119	AB
D8806	VHD1SS119//-1	J	1SS119	AB
D9901	VHD1SS119//-1	J	1SS119	AB
D9902	VHD1SS119//-1	J	1SS119	AB
D9903	RH-EX0616GEZZ	J	Zener Diode	AA
D9904	VHD1SS119//-1	J	1SS119	AB
D9905	VHD1SS119//-1	J	1SS119	AB
D9906	VHD1SS119//-1	J	1SS119	AB

PACKAGED CIRCUIT

Ref. No.	Part No.	★	Description	Code
X8801	RCRSB0128GEZZ	J	Crystal, 8 MHz	AF

COIL AND TRANSFORMERS

Ref. No.	Part No.	★	Description	Code
L2301	VP-DF221K0000	J	Coil, 220μH	AB
L6601	VP-YF822J0000	J	Coil, 8.2mH	AC
L6602	VP-DF221K0000	J	Coil, 220μH	AB
T6601	RTRNH0053GEZZ	J	Transformer	AE

CONTROLS

Ref. No.	Part No.	★	Description	Code
R6634	RVR-M4421GEZZ	J	100k(B) Bias Adj.	AB
R7701	RVR-M4421GEZZ	J	100k(B) PG Adj.	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C2301	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C2302	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C6601	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C6603	VCEAGA1HW335M	J	3.3 50V Electrolytic	AB
C6604	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6605	VCFYSA1HB123J	J	0.012 50V M. Polyester	AA
C6606	VCKYD41CX392N	J	3900p 16V Ceramic	AB
C6607	VCEAGA1CW107M	J	100 16V Electrolytic	AB
C6608	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C6610	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C6611	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6612	VCFYSA1HB183J	J	0.018 50V M. Polyester	AA
C6614	VCCCCY1HH151J	J	150p 50V Ceramic	AA
C6615	VCCCCY1HH151J	J	150p 50V Ceramic	AA
C6616	VCKYD41HB271K	J	270p 50V Ceramic	AA
C6617	VCCCCY1HH390J	J	39p 50V Ceramic	AA
C6618	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C6619	VCKYD41HB331K	J	330p 50V Ceramic	AA
C6620	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C6621	VCEAGA1CW476M	J	47 16V Electrolytic	AB
C6622	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C6623	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C6624	VCQPSA2AA562J	J	5600p 100V Polypro Film	AC
C6625	VCCCCY1HH221J	J	220p 50V Ceramic	AA
C6626	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C6633	VCEAEA1CW476M	J	47 16V Electrolytic	AB
C7701	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C7702	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7703	VCE9EA1HW105M	J	1 50V Elect. (N.P)	AC
C7704	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C7705	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C7707	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C7708	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C7709	VCKYCY1HB681K	J	680p 50V Ceramic	AA
C7710	VCE9EA1HW105M	J	1 50V Elect. (N.P)	AC
C7711	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C7712	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7713	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C7714	VCE9EA1HW225M	J	2.2 50V Elect. (N.P)	AB
C7715	VCE9EA1HW225M	J	2.2 50V Elect. (N.P)	AB
C7716	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7717	VCFYSA1HB153J	J	0.015 50V M. Polyester	AA
C7718	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C7719	VCCCCY1HH221J	J	220p 50V Ceramic	AA
C7720	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C7721	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C7722	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C7723	VCEAGA1HW225M	J	2.2 50V Electrolytic	AB
C7724	VCFYSA1HB104J	J	0.1 50V M. Polyester	AB

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CAPACITORS (Continued)

Ref. No.	Part No.	★	Description	Code
C7725	VCEAGA0JW107M	J	100 6.3V Electrolytic	AB
C7727	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7728	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7729	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7730	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C7731	VCEAGA1CW226M	J	22 16V Electrolytic	AB
C7732	VCEAGA0JW107M	J	100 6.3V Electrolytic	AB
C7734	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C7735	VCEAGA1CW106M	J	10 16V Electrolytic	AA
C7736	VCFYSA1HB334J	J	0.33 50V M. Polyester	AB
C7737	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C7738	VCFYSA1HB103J	J	0.01 50V M. Polyester	AA
C7739	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C7741	VCKYD41CX332N	J	3300p 16V Ceramic	AA
C7751	VCKYPA1HB102K	J	1000p 50V Ceramic	AA
C8801	VCE9EA1HW105M	J	1 50V Elect. (N.P)	AC
C8802	VCEAGA1EW476M	J	47 25V Electrolytic	AB
C8803	VCEAGA1HW105M	J	1 50V Electrolytic	AC
C8804	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8805	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8806	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8807	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8808	VCEAGA1EW107M	J	100 25V Electrolytic	AD
C8809	RC-KZ0019GEZZ	J	0.1 25V Ceramic	AA
C8813	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8814	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8815	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8817	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8818	VCE9EA1HW105M	J	1 50V Elect. (N.P)	AC
C8819	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8820	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8821	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8822	VCFYSA1HB104J	J	0.1 50V M. Polyester	AB
C8823	VCEAGA0JW476M	J	47 6.3V Electrolytic	AB
C8827	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8828	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8829	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8830	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C8831	VCEAGA1HW225M	J	2.2 50V Electrolytic	AB
C8832	VCCCCY1HH220J	J	22p 50V Ceramic	AA
C8833	VCCCCY1HH220J	J	22p 50V Ceramic	AA
C8835	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8836	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C8843	RC-KZ0011GEZZ	J	0.1 25V Ceramic	AA
C8844	RC-KZ0011GEZZ	J	0.1 25V Ceramic	AA
C9901	VCEAGA1AW226M	J	22 10V Electrolytic	AA
C9902	VCEAGA1AW226M	J	22 10V Electrolytic	AA
C9903	VCEAGA0JW226M	J	22 6.3V Electrolytic	AA
C9904	VCEAGA0JW226M	J	22 6.3V Electrolytic	AA
C9905	VCEAGA1CW107M	J	100 16V Electrolytic	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
R2301	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R2302	VRD-RA2EE331J	J	330 1/4W Carbon	AA
R2303	VRD-RA2BE750J	J	75 1/8W Carbon	AA
R2304	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R6601	VRS-CY1JF100J	J	10 1/16W Metal Oxide	AA
R6602	VRS-CY1JF333J	J	33k 1/16W Metal Oxide	AA
R6603	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R6604	VRD-RA2BE274J	J	270k 1/8W Carbon	AA
R6605	VRS-CY1JF682J	J	6.8k 1/16W Metal Oxide	AA
R6607	VRS-CY1JF182J	J	1.8k 1/16W Metal Oxide	AA
R6608	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R6609	VRS-CY1JF182J	J	1.8k 1/16W Metal Oxide	AA
R6610	VRD-RA2BE105J	J	1M 1/8W Carbon	AA
R6611	VRD-RA2BE182J	J	1.8k 1/8W Carbon	AA
R6612	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R6615	VRS-CY1JF823J	J	82k 1/16W Metal Oxide	AA
R6616	VRS-CY1JF153J	J	15k 1/16W Metal Oxide	AA
R6617	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide	AA
R6618	VRS-CY1JF153J	J	15k 1/16W Metal Oxide	AA
R6619	VRS-CY1JF181J	J	180 1/16W Metal Oxide	AA
R6621	VRS-CY1JF683J	J	68k 1/16W Metal Oxide	AA
R6622	VRS-CY1JF683J	J	68k 1/16W Metal Oxide	AA
R6623	VRS-CY1JF333J	J	33k 1/16W Metal Oxide	AA
R6624	VRS-CY1JF563J	J	56k 1/16W Metal Oxide	AA
R6625	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R6626	VRS-CY1JF332J	J	3.3k 1/16W Metal Oxide	AA
R6628	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R6629	VRS-CY1JF153J	J	15k 1/16W Metal Oxide	AA
R6630	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R6631	VRD-RA2BE470J	J	47 1/8W Carbon	AA
R6632	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R6633	VRD-RA2EE4R7J	J	4.7 1/4W Carbon	AA
R6634	*See Controls*			
R6635	VRD-RA2BE153J	J	15k 1/8W Carbon	AA
R6637	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R6638	VRD-RA2BE473J	J	47k 1/8W Carbon	AA
R6639	VRS-CY1JF563J	J	56k 1/16W Metal Oxide	AA
R6640	VRS-CY1JF681J	J	680 1/16W Metal Oxide	AA
R6641	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R6642	VRS-CY1JF222J	J	2.2k 1/16W Metal Oxide	AA
R6643	VRS-CY1JF154J	J	150k 1/16W Metal Oxide	AA
R7701	*See Controls*			
R7703	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R7704	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R7706	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R7707	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R7708	VRS-CY1JF182J	J	1.8k 1/16W Metal Oxide	AA
R7709	VRS-CY1JF334J	J	330k 1/16W Metal Oxide	AA
R7710	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R7711	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R7712	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R7713	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R7714	VRS-CY1JF821J	J	820 1/16W Metal Oxide	AA
R7715	VRS-CY1JF681J	J	680 1/16W Metal Oxide	AA
R7716	VRS-CY1JF391J	J	390 1/16W Metal Oxide	AA

PWB-E DUNTK4810TEV3/V5 VCR MAIN UNIT (Continued)

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R7717	VRS-CY1JF182J	J	1.8k 1/16W Metal Oxide	AA
R7718	VRS-CY1JF154J	J	150k 1/16W Metal Oxide	AA
R7719	VRS-CY1JF334J	J	330k 1/16W Metal Oxide	AA
R7720	VRS-CY1JF104J	J	100k 1/16W Metal Oxide	AA
R7721	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA
R7722	VRS-CY1JF104J	J	100k 1/16W Metal Oxide	AA
R7723	VRS-CY1JF684J	J	680k 1/16W Metal Oxide	AA
R7724	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA
R7725	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R7726	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R7727	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R7728	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R7729	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R7730	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R7731	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R7732	VRS-CY1JF393J	J	39k 1/16W Metal Oxide	AA
R7735	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R7736	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R7737	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R7738	VRS-CY1JF273J	J	27k 1/16W Metal Oxide	AA
R7739	VRS-CY1JF124J	J	120k 1/16W Metal Oxide	AA
R7740	VRD-RA2BE564J	J	560k 1/8W Carbon	AA
R7741	VRS-CY1JF123J	J	12k 1/16W Metal Oxide	AA
R7742	VRS-CY1JF224J	J	220k 1/16W Metal Oxide	AA
R7746	VRS-CY1JF470J	J	47 1/16W Metal Oxide	AA
R7751	VRD-RM2HD1R0J	J	1 1/2W Carbon	AA
R7752	VRD-RM2HD1R0J	J	1 1/2W Carbon	AA
R7753	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R7755	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R8801	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R8802	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R8803	VRD-RA2BE394J	J	390k 1/8W Carbon	AA
R8804	VRS-CY1JF124J	J	120k 1/16W Metal Oxide	AA
R8805	VRS-CY1JF683J	J	68k 1/16W Metal Oxide	AA
R8806	VRS-CY1JF823J	J	82k 1/16W Metal Oxide	AA
R8807	VRS-CY1JF682J	J	6.8k 1/16W Metal Oxide	AA
R8808	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8809	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8810	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8811	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8812	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8813	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8814	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8815	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8816	VRD-RA2BE272J	J	2.7k 1/8W Carbon	AA
R8817	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R8818	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide	AA
R8826	VRS-CY1JF222J	J	2.2k 1/16W Metal Oxide	AA
R8827	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R8829	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R8830	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8831	VRD-RA2BE103J	J	10k 1/8W Carbon	AA

RESISTORS (Continued)

Ref. No.	Part No.	★	Description	Code
R8832	VRS-CY1JF823J	J	82k 1/16W Metal Oxide	AA
R8833	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R8834	VRS-CY1JF104J	J	100k 1/16W Metal Oxide	AA
R8835	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8836	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8837	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8838	VRS-CY1JF331J	J	330 1/16W Metal Oxide	AA
R8840	VRS-CY1JF183J	J	18k 1/16W Metal Oxide	AA
R8841	VRS-CY1JF822J	J	8.2k 1/16W Metal Oxide	AA
R8846	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R8852	VRD-RA2BE102J	J	1k 1/8W Carbon	AA
R8853	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8854	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8855	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R8858	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8859	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R8860	VRS-CY1JF561J	J	560 1/16W Metal Oxide	AA
R8861	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8862	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8863	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R8864	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8865	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R8866	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R8867	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R8868	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R8869	VRS-CY1JF823J	J	82k 1/16W Metal Oxide	AA
R8870	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R8871	VRS-CY1JF393J	J	39k 1/16W Metal Oxide	AA
R8872	VRS-CY1JF153J	J	15k 1/16W Metal Oxide	AA
R8873	VRS-CY1JF183J	J	18k 1/16W Metal Oxide	AA
R8874	VRS-CY1JF152J	J	1.5k 1/16W Metal Oxide	AA
R8875	VRS-CY1JF473J	J	47k 1/16W Metal Oxide	AA
R8877	VRS-CY1JF822J	J	8.2k 1/16W Metal Oxide	AA
R8878	VRS-CY1JF822J	J	8.2k 1/16W Metal Oxide	AA
R8880	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R8881	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R8882	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R8889	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
R9901	VRS-CY1JF222J	J	2.2k 1/16W Metal Oxide	AA
R9902	VRS-CY1JF101J	J	100 1/16W Metal Oxide	AA
⚠ R9903	VRG-RC2EB3R3J	J	3.3 1/4W Fuse Resistor	AB
	or			
	VRG-SC2EB3R3J	J	3.3 1/4W Fuse Resistor	AB
R9904	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R9905	VRS-CY1JF223J	J	22k 1/16W Metal Oxide	AA
R9906	VRD-RA2BE103J	J	10k 1/8W Carbon	AA
R9907	VRS-CY1JF391J	J	390 1/16W Metal Oxide	AA
R9908	VRS-CY1JF103J	J	10k 1/16W Metal Oxide	AA
R9909	VRD-RA2BE100J	J	10 1/8W Carbon	AA
R9910	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R9911	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R9912	VRS-CY1JF472J	J	4.7k 1/16W Metal Oxide	AA
R9913	VRD-RA2BE472J	J	4.7k 1/8W Carbon	AA
R9914	VRD-RA2BE102J	J	1k 1/8W Carbon	AA

PWB-E DUNTK4810TEV3/V5
VCR MAIN UNIT (Continued)

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
FB6601	RBLN-0014GEZZ	J	Ferrite Bead	AB
	QPLGN0252GEZZ	J	Plug 2-pin, TP6601~6602	AA
P7703	QPLGN0878GEZZ	J	Plug 8-pin, (EC)	AC
P7705	QPLGN0578GEZZ	J	Plug 5-pin, (EE)	AB
P7706	QPLGN0247REZZ	J	Plug 2-pin, (EF)	AA
P7707	QPLGZ0746GEZZ	J	Plug 7-pin, (EG)	AB
P7708	QPLGZ0746GEZZ	J	Plug 7-pin, (EH)	AB
P7709	QPLGZ0546GEZZ	J	Plug 5-pin, (EI)	AB
P7710	QPLGZ0546GEZZ	J	Plug 5-pin, (EJ)	AB
P7711	QPLGN0478GEZZ	J	Plug 4-pin, (EK)	AB
P7712	QPLGN0878GEZZ	J	Plug 8-pin, (EL)	AC
P7713	QPLGN0878GEZZ	J	Plug 8-pin, (EM)	AC
P7714	QPLGN0478GEZZ	J	Plug 4-pin, (EN)	AB
P7715	QPLGN0378GEZZ	J	Plug 3-pin, (EO)	AB
P7716	QPLGN0678GEZZ	J	Plug 6-pin, (EP)	AB
SC7701	QSOCN1584REZZ	J	Socket 15-pin, (EA)	AE
SC7702	QSOCN0584REZZ	J	Socket 5-pin, (EB)	AB
SC7704	QSOCN0684REZZ	J	Socket 6-pin, (ED)	AB

—— End of PWB-E ——

PWB-H DUNTK4813TEV0
OPERATION UNIT

RESISTORS

Ref. No.	Part No.	★	Description	Code
R8101	VRD-RA2BE122J	J	1.2k 1/8W Carbon	AA
R8102	VRD-RA2BE152J	J	1.5k 1/8W Carbon	AA
R8103	VRD-RA2BE222J	J	2.2k 1/8W Carbon	AA

SWITCHES

Ref. No.	Part No.	★	Description	Code
⚠ S8101	QSW-K0079GEZZ	J	FF	AB
⚠ S8102	QSW-K0079GEZZ	J	Play	AB
⚠ S8103	QSW-K0079GEZZ	J	Rew.	AB
⚠ S8104	QSW-K0079GEZZ	J	Stop/Eject	AB

MISCELLANEOUS PART

Ref. No.	Part No.	★	Description	Code
P8101	QPLGN0278GEZZ	J	Plug 2-pin, (HA)	AA

—— End of PWB-H ——

PWB-J DUNTK4812TEV1
A/V JACK UNIT

COIL

Ref. No.	Part No.	★	Description	Code
L8201	VP-XF120K0000	J	Coil, 12μH	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C8202	VCKYD41CY103N	J	0.01 16V Ceramic	AA
C8203	VCKYD41HB102K	J	1000p50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R8201	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R8202	VRD-RA2BE822J	J	8.2k 1/8W Carbon	AA
R8203	VRD-RA2BE562J	J	5.6k 1/8W Carbon	AA
R8204	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R8205	VRD-RA2BE392J	J	3.9k 1/8W Carbon	AA
R8206	VRD-RA2BE682J	J	6.8k 1/8W Carbon	AA
R8207	VRD-RA2BE183J	J	18k 1/8W Carbon	AA
R8210	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R8211	VRD-RA2BE101J	J	100 1/8W Carbon	AA
R8213	VRD-RA2BE101J	J	100 1/8W Carbon	AA

SWITCHES

Ref. No.	Part No.	★	Description	Code
⚠ S8201	QSW-K0079GEZZ	J	Rec.	AB
⚠ S8202	QSW-K0079GEZZ	J	Channel ∧	AB
⚠ S8203	QSW-K0079GEZZ	J	Channel ∨	AB
⚠ S8204	QSW-K0079GEZZ	J	Sound Volume ∧	AB
⚠ S8205	QSW-K0079GEZZ	J	Sound Volume ∨	AB
⚠ S8206	QSW-K0079GEZZ	J	All Clear	AB

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
CN8203	QCNW-0133AJZZ	J	Connecting Wire, (JC)	AG
⚠ J8201	QJAKF0001AJZZ	J	Front A/V Jack	AH
P8201	QPLGN0678GEZZ	J	Plug 6-pin, (JA)	AB
P8202	QPLGN0478GEZZ	J	Plug 4-pin, (JB)	AB
P8204	QPLGN0378GEZZ	J	Plug 3-pin, (JD)	AB
	LHLDW1066PEKZ	J	Wire Holder, ×2 used	AC

—— End of PWB-J ——

PWB-L DUNTK4814TEV0 LED UNIT (VT-3700S)

DIODES

Ref. No.	Part No.	★	Description	Code
D8301	RH-PX0196GEZZ	J	LED, Power/Wake-Up Timer	AC
D8302	RH-PX0196GEZZ	J	LED, Rec./Timer	AC
D8303	RH-PX0192GEZZ	J	LED, Child Lock	AB
D8304	RH-PX0192GEZZ	J	LED, Dew	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
R8301	VRD-RA2BE181J	J	180 1/8W Carbon	AA
R8302	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R8303	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R8304	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R8305	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R8306	VRD-RA2BE271J	J	270 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P8301	QPLGN0778GEZZ	J	Plug 7-pin, (LA)	AC
	LHLDP1141AJZZ	J	LED Holder	AD

—— End of PWB-L ——

PWB-L DUNTK4817TEV0 LED UNIT (VT-5400S)

DIODES

Ref. No.	Part No.	★	Description	Code
D8301	RH-PX0196GEZZ	J	LED, Power/Wake-Up Timer	AC
D8302	RH-PX0196GEZZ	J	LED, Rec./Timer	AC
D8303	RH-PX0192GEZZ	J	LED, Child Lock	AB
D8304	RH-PX0192GEZZ	J	LED, Dew	AB

RESISTORS

Ref. No.	Part No.	★	Description	Code
R8301	VRD-RA2BE181J	J	180 1/8W Carbon	AA
R8302	VRD-RA2BE151J	J	150 1/8W Carbon	AA
R8303	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R8304	VRD-RA2BE221J	J	220 1/8W Carbon	AA
R8305	VRD-RA2BE271J	J	270 1/8W Carbon	AA
R8306	VRD-RA2BE271J	J	270 1/8W Carbon	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
P8301	QPLGN0778GEZZ	J	Plug 7-pin, (LA)	AC
	LHLDP1141AJZZ	J	LED Holder	AD

—— End of PWB-L ——

PWB-X DUNTK4815TEV2/V4 HEAD AMP. UNIT

INTEGRATED CIRCUIT

Ref. No.	Part No.	★	Description	Code
IC3301	VHiSTV5715/-1	J	PB/Rec. Amp.	AH

DIODES

Ref. No.	Part No.	★	Description	Code
D3301	VHD1SS119//-1	J	1SS119	AB
D3302	VHD1SS119//-1	J	1SS119	AB

COILS

Ref. No.	Part No.	★	Description	Code
L3301	VP-MK101K0000	J	Coil, 100μH	AB
L3302	VP-MK101K0000	J	Coil, 100μH	AB

CAPACITORS

Ref. No.	Part No.	★	Description	Code
C3306	VCKYCY1EF223Z	J	0.022 25V Ceramic	AA
C3307	VCKYCY1EF223Z	J	0.022 25V Ceramic	AA
C3308	VCKYD41HF104Z	J	0.1 50V Ceramic	AA
C3309	VCKYD41HF104Z	J	0.1 50V Ceramic	AA
C3310	VCKYCY1EF223Z	J	0.022 25V Ceramic	AA
C3311	VCKYCY1EF223Z	J	0.022 25V Ceramic	AA
C3312	VCFYSA1HB223J	J	0.022 50V M. Polyester	AA
C3313	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C3317	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C3318	VCKYCY1HB102K	J	1000p 50V Ceramic	AA
C3319	VCEAEA0JW476M	J	47 6.3V Electrolytic	AB
C3320	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA
C3321	VCEAEA1CW476M	J	47 16V Electrolytic	AB
C3322	VCKYCY1HF103Z	J	0.01 50V Ceramic	AA

RESISTORS

Ref. No.	Part No.	★	Description	Code
R3301	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3302	VRD-RA2BE681J	J	680 1/8W Carbon	AA
R3303	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3304	VRS-CY1JF122J	J	1.2k 1/16W Metal Oxide	AA
R3305	VRS-CY1JF562J	J	5.6k 1/16W Metal Oxide	AA
R3306	VRS-CY1JF333J	J	33k 1/16W Metal Oxide	AA
R3307	VRS-CY1JF154J	J	150k 1/16W Metal Oxide	AA
R3309	VRS-CY1JF100J	J	10 1/16W Metal Oxide	AA
R3315	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3316	VRS-CY1JF102J	J	1k 1/16W Metal Oxide	AA
R3323	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA
R3326	VRS-CY1JF000J	J	0 1/16W Metal Oxide	AA

MISCELLANEOUS PARTS

Ref. No.	Part No.	★	Description	Code
SC3301	QSOCN0532REZZ	J	Socket 5-pin, (XA)	AB
SC3302	QSOCN1071REZZ	J	Socket 10-pin, (XB)	AC
SLD3301	PSLDM4372AJFW	J	Shield, Frame	AF
SLD3302	PSLDM4373AJFW	J	Shield, Cover	AE

—— End of PWB-X ——

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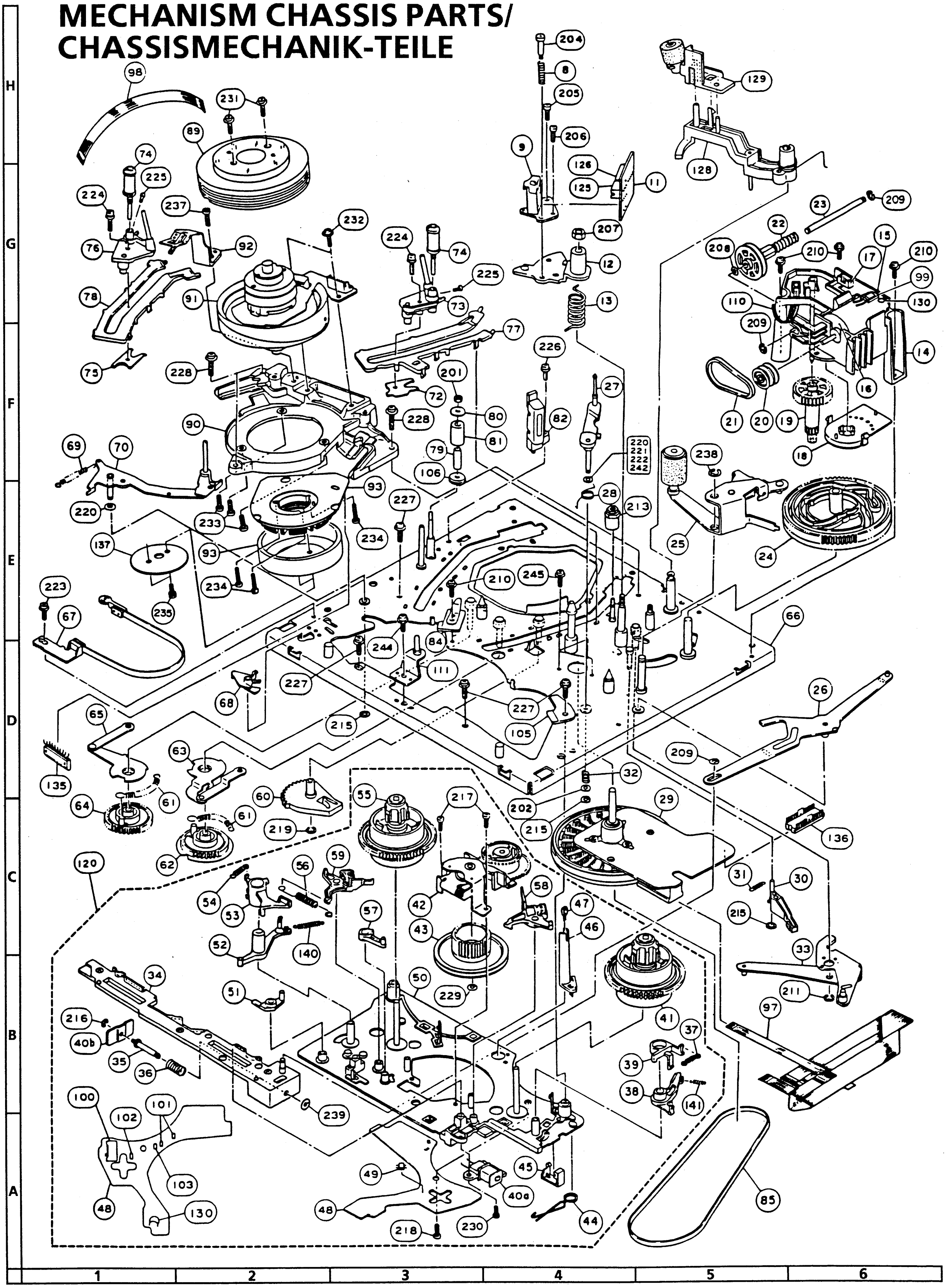
Ref. No.	Part No.	★	Description	Code
1 | 7	—— Not Used ——			
8	MSPRC0144AJFJ	V	Azimuth Spring	AB
	or			
	MSPRC0144GEFJ	J		AB
9	RHEDU0070AJZZ	V	Audio/Control Head	AX
	or		Ass'y	
	RHEDU0070GEZZ	J		AS
10	—— Not Used ——			
11	QPWBF3777AJZZ	V	Audio/Control Head PWB	AD
	or			
	QPWBF3777GEZZ	J		AB
12	MLEVF0292AJZZ	V	Audio/Control Head Arm	AH
	or			
	MLEVF0292GEZZ	J		AD
13	MSPRD0087AJFJ	V	Audio/Control Head	AC
	or		Arm Spring	
	MSPRD0087GEFJ	J		AA
14	LHLDZ1606AJZZ	V	Loading Block Holder	AG
	or		Ass'y	
	LHLDZ1606GEZZ	J		AC
15	QPWBF3842GEZZ	J	Loading Block PWB	AD
16	RMOTM1049GEZZ	J	Loading Motor	AM
17	QPLGN0880GEZZ	J	Plug, 8-pin (MG)	AC
18	QSW-R0034GEZZ	J	Cam Switch	AF
19	NGERW1032AJZZ	V	Worm Wheel	AD
	or			
	NGERW1032GEZZ	J		AC
20	NPLYV0133AJZZ	V	Loading Motor Pulley	AD
	or			
	NPLYV0133GEZZ	J		AC
21	NBLTK0058AJ00	V	Loading Belt	AC
	or			
	NBLTK0058GE00	J		AA
22	NGERW1031AJZZ	V	Worm Ass'y	AE
	or			
	NGERW1031GEZZ	J		AC
23	NSFTG0045AJFJ	V	Worm Shaft	AD
	or			
	NSFTG0045GEFJ	J		AB
24	NGERH1196GEZZ	J	Master Cam	AC
25	MLEVF0281GEZZ	J	Pinch Roller Lever Ass'y	AN
26	MLEVF0348AJZZ	V	Relay Shifter Lever	AH
	or			
	MLEVF0348GEZZ	J		AD
27	MLEVC0033GEZZ	J	Reverse Guide	AG
28	MSPRD0086AJFJ	V	Reverse Guide Spring	AB
	or			
	MSPRD0086GEFJ	J		AA
29	RMOTN2047GEZZ	J	Capstan D.D. Motor	BE
30	MLEVP0136GEZZ	J	Slow Brake Lever	AA
31	MSPRT0329GEFJ	J	Slow Brake Spring	AA
32	MSPRC0151AJFJ	V	Reverse Guide Spring	AB
	or			
	MSPRC0151GEFJ	J		AA
33	MLEVF0379AJZZ	V	Relay Gear Drive Lever	AG
	or			
	MLEVF0379GEZZ	J		AD
34	MSLiF0043GEZZ	J	Brake Shifter	AK
35	NSFTZ0068GEFD	J	Brake Lock Shaft	AC
36	MSPRC0143GEFJ	J	Absorber Plate Spring	AB
37	MSPRT0274GEFJ	J	Video Search Spring	AB
38	MLEVP0244GEZZ	J	Video Search Brake Lever	AB
39	MLEVP0131GEZZ	J	Video Search	AC
			Reciprocating Lever	
40	RPLU-0083GEZZ	J	Brake Solenoid Ass'y	AF
41	NDAiV1060GEZZ	J	Take-Up Reel Disk Ass'y	AH
42	NGERH1128GEZZ	J	Idler Gear Ass'y	AN
43	NPLYV0134GEZZ	J	Reel Pulley	AC
44	MSPRD0085GEFJ	J	Shifter Spring	AB
45	PCOVP1018GEZZ	J	Shifter Spring Cover	AC
46	LHLDP1092GEZZ	J	Cassette LED Holder	AE
47	RH-PX0180GEZZ	J	Cassette LED	AD
48	QPWBF2977GEZZ	J	Reel Sensor PWB	AK
49	RH-PX0181GEZZ	J	Reel Sensor	AE
50	LCHSS0032GEZZ	J	Reel Block Chassis	AK
51	MLEVP0134GEZZ	J	Tension Adjusting Lever	AC
52	MLEVP0194GEZZ	J	Tension Release Lever	AB
53	MLEVP0132GEZZ	J	Back Tension Lever	AC
54	MSPRT0360GEFJ	J	Back Tension lever spring	AA
55	NDAiV1062GEZZ	J	Supply Reel Disk Ass'y	AH
56	MSPRT0336GEFJ	J	Main Brake Spring	AB
57	MLEVP0135GEZZ	J	Intermediate Lever	AC
58	MLEVP0206GEZZ	J	Main Take-Up Brake	AC
			Lever	
59	MLEVP0205GEZZ	J	Main Supply Brake Lever	AL
60	NGERH1121GEZZ	J	Loading Relay Gear	AA
61	MSPRT0271AJFJ	V	Loading	AC
	or		Reciprocating Spring	
	MSPRT0271GEFJ	J		AA
62	NGERH1120GEZZ	J	Take-Up Loading Gear	AA
63	MLEVF0304AJZZ	V	Take-Up Loading	AG
	or		Arm Ass'y	
	MLEVF0304GEZZ	J		AC
64	NGERH1119GEZZ	J	Supply Loading Gear	AA
65	MLEVF0303AJZZ	V	Supply Loading	AG
	or		Arm Ass'y	
	MLEVF0303GEZZ	J		AC
66	LCHSM0142AJZZ	V	Main Chassis Ass'y	AY
	or			
	LCHSM0142GEZZ	J		AU
67	LBNDK1002GEZZ	J	Tension Band Ass'y	AD
68	LHLDZ1607GEZZ	J	Tension Spring Hook	AA
			Plate	
69	MSPRT0275AJFJ	V	Tension Spring	AC
	or			
	MSPRT0275GEFJ	J		AA

MECHANISM CHASSIS PARTS
(Continued)

Ref. No.	Part No.	★	Description	Code
70	MLEVF0291AJZZ	V	Tension Arm Ass'y	AK
	or			
	MLEVF0291GEZZ	J		AF
71	—— *Not Used* ——			
72	MSLiF0049GEFW	J	Take-Up Pole Base Slider	AB
73	LPOLM0037GEZZ	J	Take-Up Pole Base Ass'y	AG
74	NROLP0104GEZZ	J	Guide Roller Ass'y	AE
75	MSLiF0048GEFW	J	Supply Pole Base Slider	AB
76	LPOLM0036GEZZ	J	Supply Pole Base Ass'y	AG
77	PGiDM0066GEZZ	J	Take-Up Loading Rail	AB
78	PGiDM0067GEZZ	J	Supply Loading Rail	AB
79	NSFTL0563GEFW	J	Supply Impedance Roller Innor	AC
80	PGiDH0031GEFW	J	Supply Impedance Roller Flange	AA
81	NROLP0084GEZZ	J	Supply Impedance Roller	AC
82	RHEDT0031AJZZ	V	Full Erase Head Ass'y	AX
	or			
	RHEDT0031GEZZ	J		AH
83	—— *Not Used* ——			
84	LANGA0054GEZZ	J	Supply Reel Retainer Ass'y	AD
85	NBLTK0059AJ00	V	Reel Belt	AD
	or			
	NBLTK0059GE00	J		AB
86	—— *Not Used* ——			
87	—— *Not Used* ——			
88	—— *Not Used* ——			
89	DDRMU0004HE22	V	Upper Drum Ass'y	BH
90	PGiDC0044GEFW	J	Drum Base	AK
91	DDRML0012HE00	J	Lower Drum Ass'y	BE
92	QBRSK0025GEZZ	J	Earth Brush Ass'y	AD
93	RMOTP1107GEZZ	J	Drum D.D. Motor Ass'y	AW
94	—— *Not Used* ——			
95	—— *Not Used* ——			
96	—— *Not Used* ——			
97	QCNW-0138AJZZ	V	Full Flat Cable	AR
98	QCNW-0139AJZZ	V	Full Flat Cable	AF
99	RDTCH0018GEZZ	J	Dew Sensor	AG
100	QSOCN0534REZZ	J	Socket, 5 pin (MF)	AC
101	VRS-TW2ED221J	J	220 1/4W Oxide Film (R8011, R8013)	AA
102	VCKYTV1HB102K	J	0.001 50V Ceramic (C8002)	AA
103	VRS-TV1JD473J	J	47k 1/16W Oxide Film (R8012)	AA
104	—— *Not Used* ——			
105	LANGA0051GEFW	J	Take-Up Reel DiskCatch Holder	AB
106	PGiDS0027GEZZ	J	Supply Impedance Roller Flange L	AA
107	—— *Not Used* ——			
108	—— *Not Used* ——			
109	—— *Not Used* ——			
110	LHLDW1033CE00	J	Wire Holder	AA
111	LPOLP0003GEZZ	J	Release Pin Bracket Ass'y	AA
112				
|	—— *Not Used* ——			
119				
120	CCHSS0032GE01	J	Reel BlockAss'y	AY
121				
|	—— *Not Used* ——			
124				
125	QPLGN0378GEZZ	J	Plug, 3 pin (MR)	AB
126	QPLGN0578GEZZ	J	Plug, 5 pin (MH)	AB
127	—— *Not Used* ——			
128	CLEVP0208GE00	J	AHC Lever Ass'y	AE
129	CLEVP0209GE01	J	AHC Roller Ass'y	AG
130	RC-KZ0019GEZZ	J	0.1 25V Ceramic (C8009)	AA
131				
|	—— *Not Used* ——			
134				
135	94SSEE0193721A	J	Drum IC	AU
136	94SSEE0193731A	J	Capstan IC	AU
137	—— *Not Used* ——			
138	—— *Not Used* ——			
139	—— *Not Used* ——			
140	MSPRT0327GEFJ	J	Tension Release Lever Spring	AA
141	MSPRT0359GEFJ	J	VS-R Auxiliary Brake Spring	AA

—— End of **MECHANISM CHASSIS PARTS** ——

MECHANISM CHASSIS PARTS/
CHASSISMECHANIK-TEILE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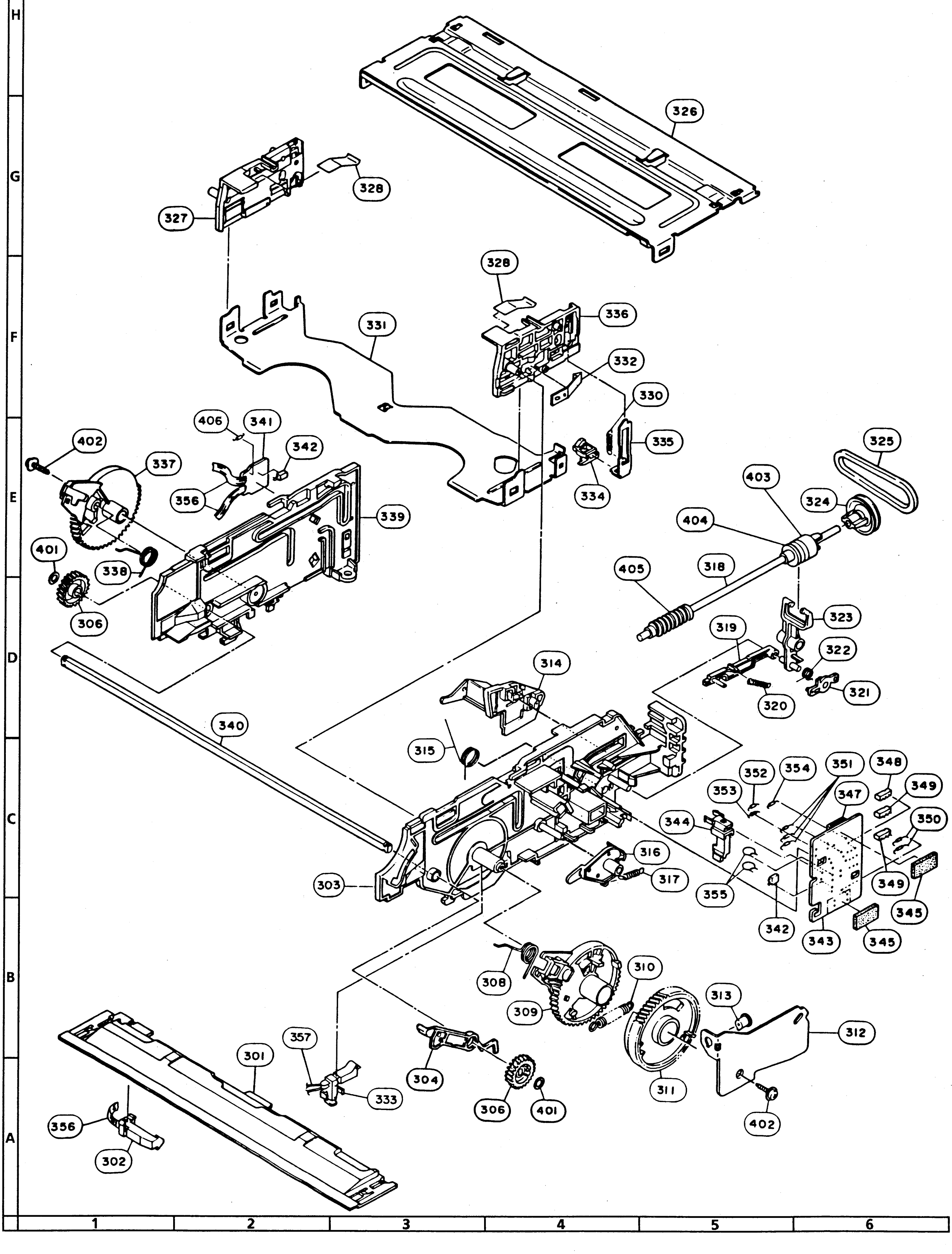
CASSETTE HOUSING CONTROL PARTS/ CASSETTENGEHÄUSE-STEUERTEILE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CASSETTE HOUSING CONTROL PARTS

Ref. No.	Part No.	★	Description	Code
	CHLDX3053TEV0	V	Cassette Housing Control Assembly	BD
301	PGiDM0069AJ00	V	Down Guide	AD
	or			
	PGiDM0069GE00	J		AC
302	QSW-F0034GEZZ	J	Cassette Erase Protection Switch	AC
303	LHLDX1014AJ00	V	Cassette Housing Frame (Right)	AM
	or			
	LHLDX1014GE00	J		AM
304	MARMP0052GE00	J	Cassette Open Lever	AB
306	NGERW1036GEZZ	J	Phase Gear	AA
308	MSPRD0088AJFJ	V	Drive Gear Spring (Right)	AA
	or			
	MSPRD0088GEFJ	J		AA
309	NGERW1034GEZZ	J	Drive Gear (Right)	AB
310	MSPRT0277AJFJ	V	Reciprocating Spring	AB
	or			
	MSPRT0277GEFJ	J		AA
311	NGERW1033GEZZ	J	Worm Wheel Gear	AB
312	LANGF9355AJFW	V	Worm Bracket	AC
	or			
	LANGF9355GEFW	J		AB
313	NBRGP0013GEZZ	J	Bearing	AA
314	MLEVP0142GEZZ	J	Open Lever	AA
315	MSPRD0091AJFJ	V	Open Lever Spring	AA
	or			
	MSPRD0091GEFJ	J		AA
316	MLEVP0141GEZZ	J	Switching Lever	AA
317	MSPRT0280AJFJ	V	Switching Lever Spring	AA
	or			
	MSPRT0280GEFJ	J		AA
318	NSFTD0016GEFD	J	Worm Shaft Ass'y	AC
319	MLEVP0140GEZZ	J	Clutch Lock Lever	AA
320	MSPRT0279AJFJ	V	Clutch Lock Lever Spring	AA
	or			
	MSPRT0279GEFJ	J		AA
321	MLEVP0139GEZZ	J	Clutch Release Lever	AA
322	MSPRD0092AJFJ	V	Clutch Release Lever Spring	AA
	or			
	MSPRD0092GEFJ	J		AA
323	MLEVP0138GEZZ	J	Clutch Lever	AA
324	NPLYV0135GEZZ	J	Pulley	AA
325	NBLTK0060AJ00	V	Cassette Loading Belt	AB
	or			
	NBLTK0060GE00	J		AB
326	LANGF9354AJFW	V	Upper Plate	AG
	or			
	LANGF9354GEFW	J		AD
327	LHLDX1013GE00	J	Slider Holder (L)	AB
328	MSPRP0115GEFJ	J	Cassette Spring	AB
330	MSPRT0281AJFJ	V	Slider Lock Spring	AA
	or			
	MSPRT0281GEFJ	J		AA
331	MSLiF0044AJFW	V	Slider	AM
	or			
	MSLiF0044GEFW	J		AF
332	MARMP0039GEZZ	J	Lock Release Lever	AA
333	QSW-F0037GEZZ	J	REC Switch	AD
334	MLEVP0143GEZZ	J	Slider Lock Cover	AA
335	LANGF9356GEFW	J	Slider Lock (R)	AA
336	LHLDX1012GE00	J	Slider Holder (R)	AB
337	NGERW1035GEZZ	J	Drive Gear (L)	AB
338	MSPRD0089AJFJ	V	Drive Gear Spring (L)	AA
	or			
	MSPRD0089GEFJ	J		AA
339	LHLDX1015AJ00	V	Cassette Housing Frame (Left)	AL
	or			
	LHLDX1015GE00	J		AC
340	NSFTD0015GEFD	J	Main Shaft	AD
341	QPWBF2894AJZZ	V	End Sensor PWB	AC
	or			
	QPWBF2894GEZZJ	J		AB
342	RH-PX0176GEZZ	J	Phototransistor (Q8005, 8006)	AE
343	QPWBF3194AJZZ	V	Start Sensor PWB	AD
	or			
	QPWBF3194GEZZ	J		AC
344	QSW-F0040GEZZ	J	Cassette Control Switch	AD
345	ZTAPEZ790008E	J	Rubber Mat	AA
347	QSOCN0595GEZZ	J	Socket, 5 pin (MA)	AB
348	VSDTC124ELT-1	J	Transistor (Q8007)	AA
349	VS2SA1561Q/1E	J	Transistor (Q8001, 8002)	AC
350	VRD-RA2BE153J	J	15k 1/8W Carbon (R8004, 8006)	AA
351	VRD-RA2BE223J	J	22k 1/8W Carbon (R8005, 8007, 8008)	AA
352	VRD-RA2BE103J	J	10k 1/8W Carbon (R8001)	AA
353	VRD-RA2BE472J	J	4.7k 1/8W Carbon (R8002)	AA
354	VRD-RA2BE332J	J	3.3k 1/8W Carbon (R8003)	AA
355	RC-KZ0028GEZZ	J	0.047 16V Ceramic (C8001, 8005)	AA
356	QCNW-4789AJZZ	V	Connecting Cord	AC
	or			
	QCNW-4789GEZZ	J		AF
357	QCNW-5421AJZZ	V	Connecting Cord	AC
	or			
	QCNW-5421GEZZ	J		AK
401	LX-WZ1020GE00	J	Cut Washer (4.2W-6.0-0.5)	AA
402	LX-HZ3046GEFD	J	Screw (B Tight BTN3P + 6S)	AA
403	NPLYV0137GEZZ	J	Coupling	AA
404	NPLYV0136GEZZ	J	Clutch	AA
405	NGERW1037GEZZ	J	Worm	AA
406	VCKYD41CY103N	J	0.01 16V Ceramic (C8006)	AA

— End of CASSETTE HOUSING CONTROL PARTS —

SCREWS, NUTS, AND WASHERS

Ref. No.	Part No.	★	Description	Code
201	XNFSD20-16000	J	Adjusting Nut	AA
202	XWHSD26-05060	J	Washer W2.6S-6-0.5	AA
203	—— *Not Used* ——			
204	LX-BZ3095GEFD	J	AC Head Screw	AA
205	XBPSD26P06000	J	Azimuth Adjusting Screw	AA
206	LX-BZ3096GEFD	J	Tilt Adjusting Screw	AA
207	XNFSD40-31000	J	Adjusting Nut (A/C Head)	AB
208	LX-WZ1048GE00	J	Washer W3.1-5.4-0.5	AA
209	LX-WZ1041GE00	J	Washer W2.6-6-0.5 (LM)	AA
210	XHPSD26P06WS0	J	Screw C2.6P + 6S	AA
211	XRESJ30-06000	J	E-Ring-3	AA
212	—— *Not Used* ——			
213	LX-NZ3046GEFW	J	Adjusting Nut	AB
214	—— *Not Used* ——			
215	LX-WZ1003GE00	J	Washer CW2-5-0.5	AA
216	XRESJ12-03000	J	E Ring-1.2-T0.3	AA
217	XHPSD26P03000	J	Screw S2.6P + 3S (S Tight)	AA
218	XHPSD20P03000	J	Screw S2P + 3S (S Tight)	AA
219	XRESJ25-04000	J	E Ring-2.5	AA
220	XWHJZ25-05050	J	Washer W2.6P-5-0.5	AA
221	XWHJZ25-01050	J	Washer W2.6P-5-0.13	AA
222	XWHJZ25-02050	J	Washer W2.6P-5-0.25	AA
223	LX-HZ3043GEZZ	J	Screw W2.6P + 6S	AA
224	LX-BZ3099GEZZ	J	Screw WSW2P + 11S (W5)	AB
225	LX-XZ3030GEFD	J	Screw M2x4	AC
226	XHPSD26P08WS0	J	Screw C2.6P + 8S	AA
227	XJPSD26P08WS0	J	B Tight Screw C2.6 + 8S	AA
228	XHPSD30P08WS0	J	Screw C3P + 8S	AA
229	LX-WZ1040GE00	J	Washer CW2.5-6-0.5	AA
230	XJBSD20P06000	J	B Tight Screw 2P + 6S	AA
231	LX-BZ3039GEFN	J	Screw W3P + 9S-NiA232	AA
232	LX-HZ3056GEFD	J	Screw S3P + 10S + W6 + SW	AA
233	XBPSD30P08J00	J	Screw SW3P + 8S	AA
234	XBPSD26P12J00	J	Screw SW2.6 + 12S	AA
235	XBPSD30P05J00	J	Screw SW3P + 5S	AA
236	—— *Not Used* ——			
237	XHPSD30P06000	J	Screw S3P + 6S	AA
238	LX-RZ3001AEZZ	J	E Ring-3 (Curl)	AA
239	LX-WZ1042GE00	J	Washer CW2.7-7-0.5	AA
240	—— *Not Used* ——			
241	—— *Not Used* ——			
242	XWHJZ25-04050	J	Washer W2.6P-5-0.4	AA
243	—— *Not Used* ——			
244	XHPSD30P04WS0	J	Screw C3P + 4S	AA
245	XHPSD26P06000	J	Screw S2.6P + 6S	AA

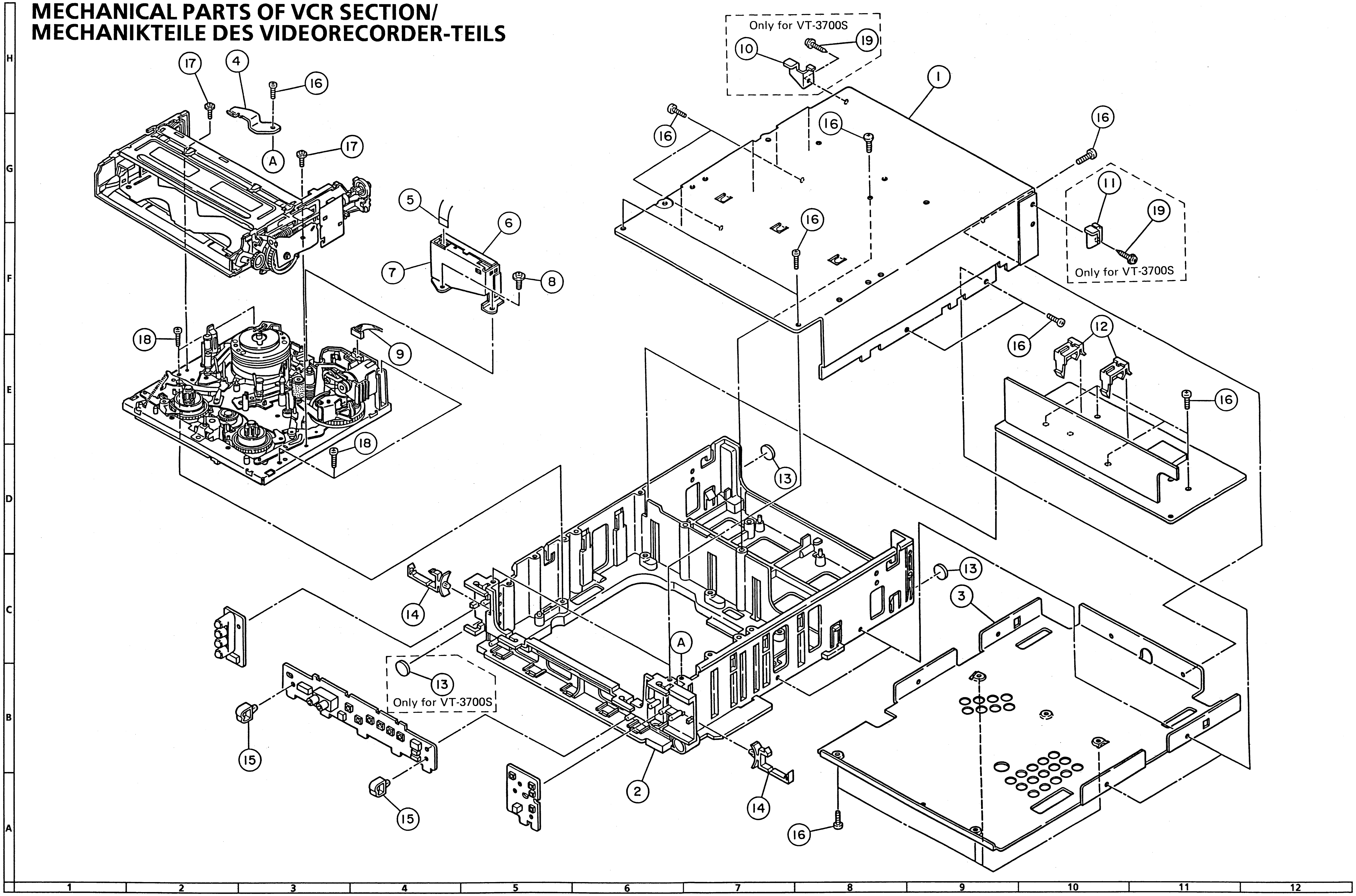
—— End of SCREWS, NUTS, AND WASHERS ——

MECHANICAL PARTS OF VCR SECTION

Ref. No.	Part No.	★	Description	Code
1	PSLDM4446AJFW	V	Top Shield	AU
2	GCABB1141AJKZ	V	Main Frame	AU
3	PSLDM4440AJFW	V	Bottom Shield	AN
4	LANGF9367AJFW	V	Cassette Bracket-R	AB
5	QCNW-0160AJZZ	V	Head Amp. FFC	AF
6	PSLDM4373AJFW	V	Head Amp. Shield (Top)	AE
7	PSLDM4372AJFW	V	Head Amp. Shield (Bottom)	AF
8	LX-HZ3056GEFD	J	Screw	AA
9	QCNW-0145AJZZ	V	Loading Motor Wire	AH
10	LANGT0020PEFW	V	Chassis Bracket (R) (VT-3700S)	AD
11	LANGT0021PEFW	V	Chassis Bracket (L) (VT-3700S)	AD
12	LHLDZ1609GEZZ	J	PWB Holder	AA
13	PSPAG0011PE00	V	Spacer (VT-3700S × 3) (VT-5400S × 2)	AB
14	LHLDW1065PEKZ	V	Wire Holder	AD
15	LHLDW1066PEKZ	V	Wire Holder	AC
16	XEBSD30P12000	J	Screw (M3 × 12)	AA
17	XHPS330P06WS0	J	Screw (M3 × 6)	AA
18	XEBSD40P12000	J	Screw (M4 × 12)	AA
19	XTASD30P12000	J	Screw (M3 × 12)	AA

—— End of MECH. PARTS OF VCR SECTION ——

MECHANICAL PARTS OF VCR SECTION/ MECHANIKTEILE DES VIDEORECORDER-TEILS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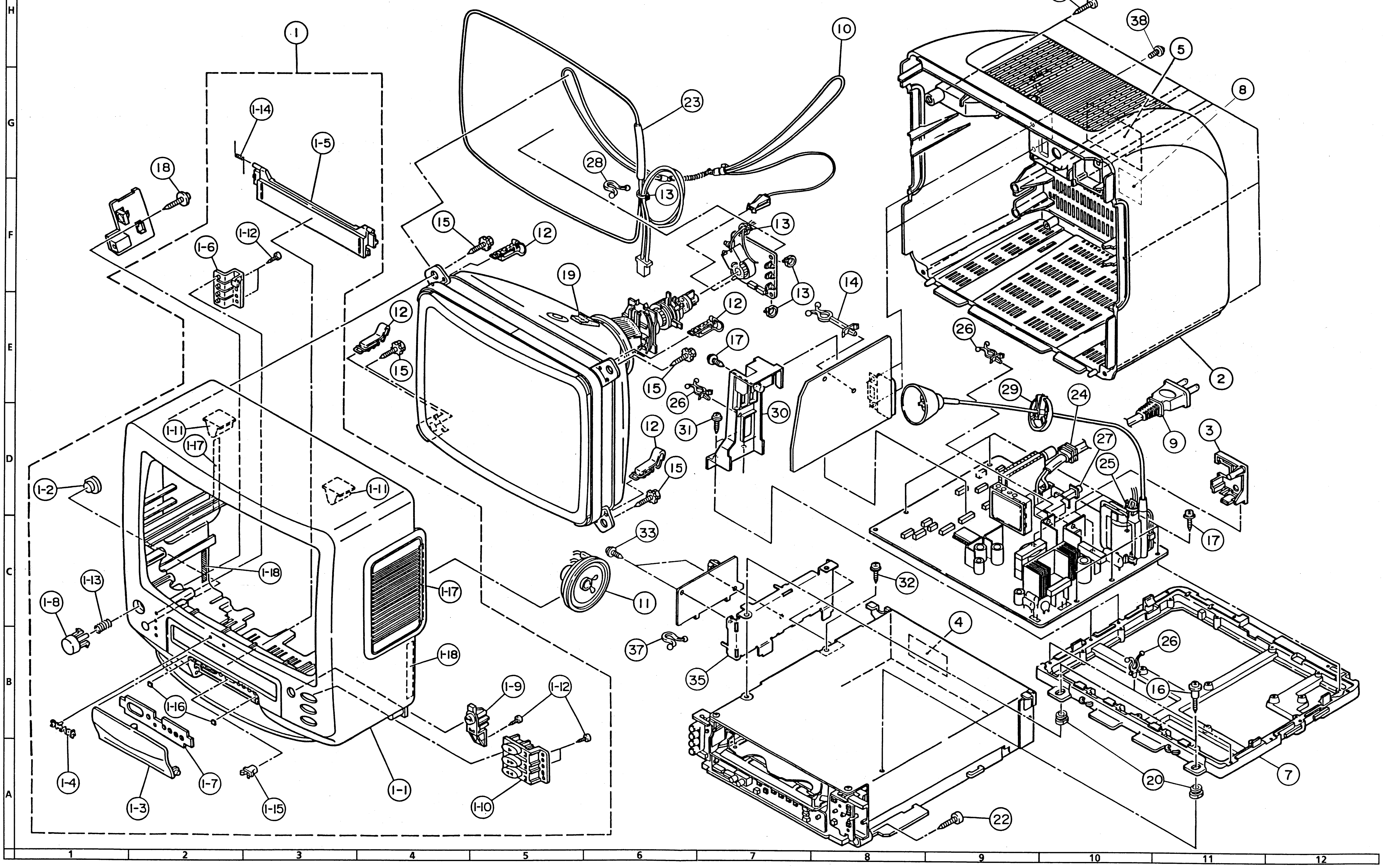
MODEL VT-3700S CABINET AND MECHANICAL PARTS/
MODELL VT-3700S GEHÄUSE UND MECHANISCHE TEILE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CABINET AND MECHANICAL PARTS
MODEL VT-3700S

Ref. No.	Part No.	★	Description	Code
1	CCABA2224WEV0	R	Cabinet Complete Ass'y	BE
1-1	*Not Available*	–	Cabinet-Front	—
1-2	GCOVA0051PESA	R	Cover, R/C	AD
1-3	GDORF0149PESA	R	Door	AE
1-4	HBDGB0014PESA	R	SHARP Badge	AE
1-5	HDECQ0035PESA	R	Cassette Flap-Door	AL
1-6	HDECQ0032PESA	R	LED Cover	AE
1-7	HiNDP0198PESA	R	Indicator (Indoor)	AE
1-8	JBTN-0122PESA	R	Button, Power	AD
1-9	JBTN-0123PESA	R	Button, Eject/Stop	AD
1-10	JBTN-0124PESA	R	Button, PB/FF/REW	AE
1-11	LHLDZ0040PEZZ	R	Holder, ×2	AB
1-12	LX-TZ3004CEFD	J	Screw, ×5	AA
1-13	MSPRC0005PEFW	R	Button Spring	AB
1-14	MSPRD0123AJFJ	J	Cassette Flap-Door Spring	AC
1-15	PKAi-0001PE00	R	Door Latch	AF
1-16	PSPAG0009PE00	R	Spacer, ×2	AB
1-17	PSPAH0023PE00	R	Spacer, ×2	AB
1-18	PSPAH0051PE00	R	Spacer, ×2	AC
2	GCABB2190PEKA	R	Cabinet-Rear	AB
3	GCOVH0019PEZZ	R	AC Cord Cover	AE
4	TCAUA0006PEZZ	R	Caution Label	AB
5	TLABM0920PEZZ	R	Model Label	AB
6	—— *Not Used* ——			
7	LCHSM0029PEZZ	R	Chassis Frame	AL
8	TLABZ0057PEZZ	R	X-Ray Label	AC
⚠ 9	QACCZ2048CESA	J	AC Cord	AR
10	QEARC1414PEZZ	R	Wire, Grounding Strap	AK
11	VSP0080P-H28A	R	Speaker, (SP301)	AM
12	LHLDC0001PEZZ	R	Degaussing Coil Holder	AC
13	LHLDW1033CE00	J	Wire Holder	AA
14	LHLDW1037PEZZ	R	Wire Holder	AB
15	LX-TZ0006PEFD	R	Screw, ×4	AD
16	LX-TZ0014PEFD	R	Screw, ×2	AD
17	LX-TZ3004CEFD	J	Screw, ×10	AA
18	LX-TZ3011CEFD	J	Screw, ×1	AA
19	PSPAG0004PEZZ	R	Wedge (Gum), Yoke Positioning, ×3	AB
20	PSPAG0010PE00	R	Spacer, ×2	AD
21	XTASD40P20000	J	Screw, ×7	AA
22	XTPSD50P25000	J	Screw, ×1	AA
⚠ 23	RCiLG0031PEZZ	R	Degaussing Coil, (L799)	AN
24	LHLDK0002PEK0	R	AC Cord Holder	AA
25	LHLDW0014PEKZ	R	Wire Holder	AB
26	LHLDW1047PEZZ	R	Wire Holder	AB
27	JBTN-0076PESA	R	Button, Main Power Sw.	AC
28	LHLDW1009PEZZ	R	Wire Holder	AA
29	LHLDZ0063PEZZ	R	HV Wire Holder	AD
30	LHLDF0020PEZZ	R	VCJ PWB Holder	AF
31	LX-TZ3029CEFD	J	Screw, ×2	AA
32	XTASD40P16000	J	Screw, ×1	AA
33	LX-CZ3001CEFD	J	Screw, ×2	AA
34	—— *Not Used* ——			
35	LANGK0084PEFW	R	Line Filter Angle	AG
36	—— *Not Used* ——			
37	LHLDW1060PEZZ	R	Wire Holder	AA
38	LX-BZ3096CEFD	J	Screw	AA

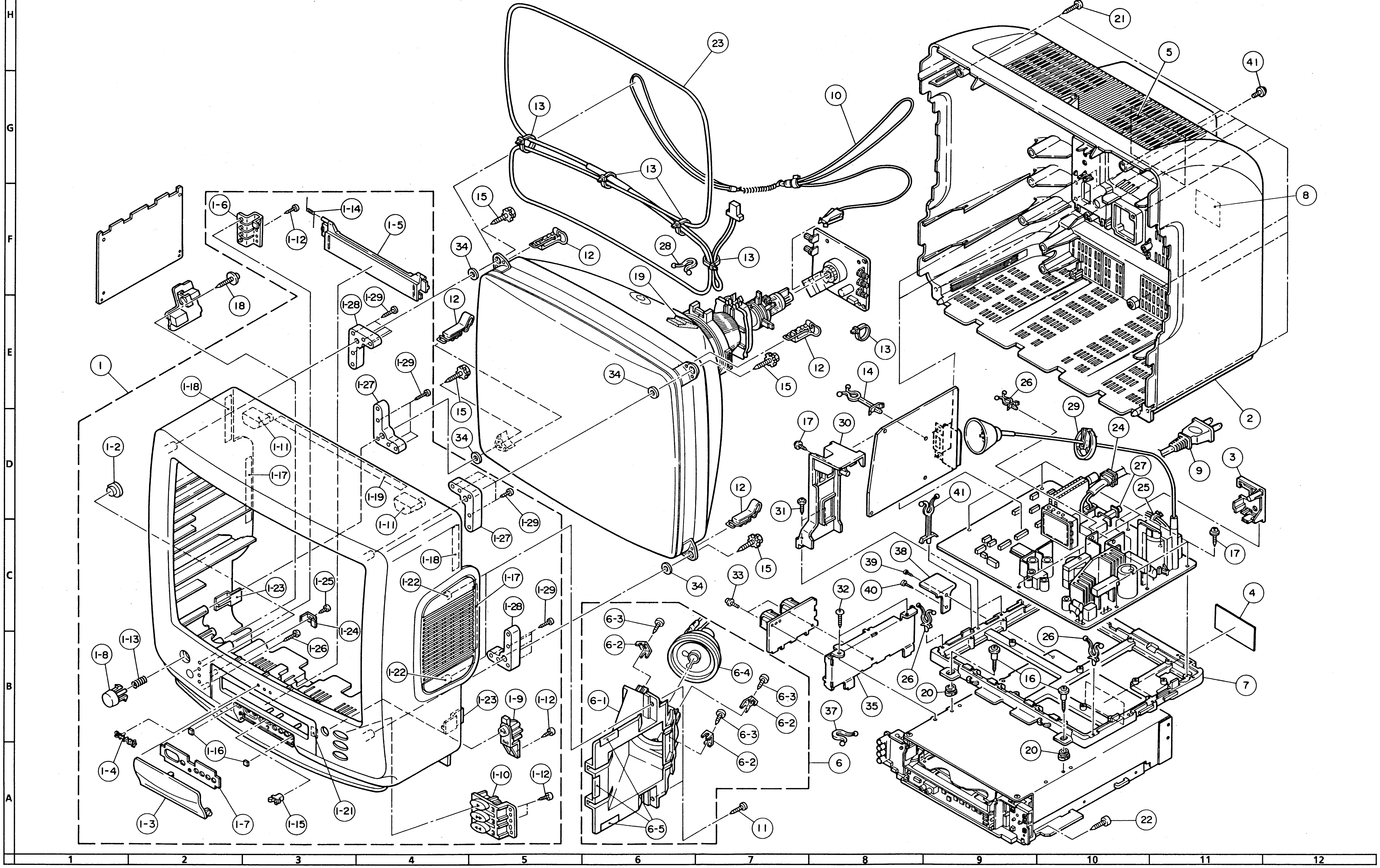
— **End of CABINET AND MECHANICAL PARTS** —

CABINET AND MECHANICAL PARTS
MODEL VT-5400S

Ref. No.	Part No.	★	Description	Code
1	CCABA2231WEV2	R	Cabinet Complete Ass'y	BK
1-1	*Not Available*	–	Cabinet-Front	—
1-2	GCOVA0051PESA	R	Cover, R/C	AD
1-3	GDORF0152PESB	R	Door	AG
1-4	HBDGB3106CESA	J	SHARP Badge	AF
1-5	HDECQ0044PESA	R	Cassette Flap-Door	AL
1-6	HDECQ0032PESA	R	LED Cover	AE
1-7	HiNDP0198PESA	R	Indicator (Indoor)	AE
1-8	JBTN-0137PESA	R	Button, Power	AD
1-9	JBTN-0147PESA	R	Button, Eject/Stop	AD
1-10	JBTN-0138PESA	R	Button, PB/FF/REW	AE
1-11	LHLDZ0069PEZZ	R	Holder, ×2	AB
1-12	LX-TZ3004CEFD	J	Screw, ×4	AA
1-13	MSPRC0005PEFW	R	Button Spring	AB
1-14	MSPRD0123AJFJ	J	Cassette Frop-Door Spring	AC
1-15	PKAi-0001PE00	R	Door Latch	AF
1-16	PSPAG0009PE00	R	Spacer, ×2	AB
1-17	PSPAH0090PE00	R	Spacer, ×2	AB
1-18	PSPAH0083PE00	R	Spacer, ×2	AC
1-19	PSPAH0080PE00	R	Spacer, ×1	AD
1-20	—— *Not Used* ——			
1-21	PSPAH0061PE00	R	Spacer, ×1	AB
1-22	LHLDZ0046PEZZ	R	Bonding Boss, ×2	AC
1-23	LHLDZ0015PEZZ	R	Bonding Rib, ×2	AD
1-24	LANGK0083PEFW	R	Angle	AC
1-25	XTASD30P08000	J	Screw	AA
1-26	XTPSD40P25000	J	Screw	AA
1-27	LHLDZ0078PEZZ	R	CRT Holder, ×2	AD
1-28	LHLDZ0079PEZZ	R	CRT Holder, ×2	AD
1-29	XTASD40P20000	J	Screw, ×16	AA
2	GCABB2201PEKA	R	Cabinet-Rear	BD
3	GCOVH0019PEZZ	R	AC Cord Cover	AE
4	TCAUA0006PEZZ	R	Caution Label	AB
5	TLABM0921PEZZ	R	Model Label	AC
6	*Not Available*	–	Speaker Ass'y	—
6-1	GBFL-0006PEZZ	R	Speaker Buffle	AE
6-2	LANGS0005PEFW	R	Speaker Angle	AB
6-3	XTASD30P12000	J	Screw	AA
6-4	VSP0080P-H28A	R	Speaker (SP301, SP302)	AM
6-5	PSPAH0091PE00	R	Spacer	AC
7	LCHSM0029PEZZ	R	Chassis Frame	AL
8	TLABZ0057PEZZ	R	X-Ray Label	AC
⚠ 9	QACCZ2048CESA	J	AC Cord	AR
10	QEARC2101PEZZ	R	Wire, Grounding Strap	AK
11	XTASD40P16000	J	Screw, ×2	AM
12	LHLDC0001PEZZ	R	Degussing Coil Holder	AC
13	LHLDW1033CE00	J	Wire Holder	AA
14	LHLDW1037PEZZ	R	Wire Holder	AB
15	LX-TZ0006PEFD	R	Screw, ×4	AD
16	LX-TZ0014PEFD	R	Screw, ×2	AD
17	LX-TZ3004CEFD	J	Screw, ×9	AA
18	LX-TZ3011CEFD	J	Screw, ×1	AA
19	PSPAG0003PEZZ	R	Wedge (Gum), Yoke Positioning, ×3	AB
20	PSPAG0010PE00	R	Spacer, ×2	AD
21	XTASD40P20000	J	Screw, ×8	AA
22	XTPSD50P25000	J	Screw, ×1	AA
⚠ 23	RCiLG0364CEZZ	J	Degaussing Coil, (L799)	AV
24	LHLDK0002PEK0	R	AC Cord Holder	AA
25	LHLDW0014PEKZ	R	Wire Holder	AB
26	LHLDW1047PEZZ	R	Wire Holder	AB
27	JBTN-0076PESA	R	Button, Main Power Sw.	AC
28	LHLDW1009PEZZ	R	Wire Holder	AA
29	LHLDZ0063PEZZ	R	HV Wire Holder	AD
30	LHLDF0020PEZZ	R	VCJ PWB Holder	AF
31	LX-TZ3029CEFD	J	Screw, ×2	AA
32	XTASD40P16000	J	Screw, ×2	AA
33	LX-CZ3001CEFD	J	Screw, ×2	AA
34	LX-WZ0015PEFD	R	CRT Washer, ×4	AB
35	LANGK0084PEFW	R	Line Filter Angle	AG
36	—— *Not Used* ——			
37	LHLDW1060PEZZ	R	Wire Holder	AA
38	LANGT0022PEFW	R	Angle	AD
39	XTASD30P12000	J	Screw	AA
40	XTASD40P12000	J	Screw	AA
41	LX-BZ3096CEFD	J	Screw, ×2	AA

— **End of CABINET AND MECHANICAL PARTS** —

MODEL VT-5400S CABINET AND MECHANICAL PARTS/ MODELL VT-5400S GEHÄUSE UND MECHANISCHE TEILE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REMOTE CONTROL UNIT

RRMCG1038PESA (VT-3700S)

Ref. No.	Part No.	★	Description	Code
	93GNR120410	R	Battery Cover	AC

RRMCG1096PESA (VT-5400S)

Ref. No.	Part No.	★	Description	Code
	93GNR120410	R	Battery Cover	AC

— End of REMOTE CONTROL UNIT —

SUPPLIED ACCESSORIES

ACCESSORIES

Ref. No.	Part No.	★	Description	Code
	RRMCG1038PESA	R	Remote Control Unit (VT-3700S)	BC
	RRMCG1096PESA	R	Remote Control Unit (VT-5400S)	BC
	TiNS-5347PEZZ	R	Operation Manual (VT-3700S)	AW
	TiNS-5348PEZZ	R	Operation Manual (VT-5400S)	AV
	QANTR0016PEZZ	R	Rod Antenna (VT-3700S)	AS

ACCESSORIES (*NOT REPLACEMENT ITEM*)

Ref. No.	Part No.	★	Description	Code
	SSAKA0005PEZZ	–	Polyethylene Bag	—
	UBATU0001MEZZ	–	Dry Batteries, Size AAA, 2 pcs	—

—— End of SUPPLIED ACCESSORIES ——

PACKING PARTS
(NOT REPLACEMENT ITEM)

MODEL VT-3700S

Ref. No.	Part No.	★	Description	Code
	SPAKC5880PEZZ	–	Packing Case	—
	SPAKP0095PEZZ	–	Polystyrene Mat	—
	SPAKX0395PEZZ	–	Buffer Material	—
	TLABN0001PEZZ	–	Serial No. Label	—

MODEL VT-5400S

Ref. No.	Part No.	★	Description	Code
	SPAKC5881PEZZ	–	Packing Case	—
	SPAKP0097PEZZ	–	Polystyrene Mat	—
	SPAKX0399PEZZ	–	Buffer Material	—
	TLABN0001PEZZ	–	Serial No. Label	—

—— End of PACKING PARTS ——

EXTENSION CABLES
(Use for servicing VCR unit)

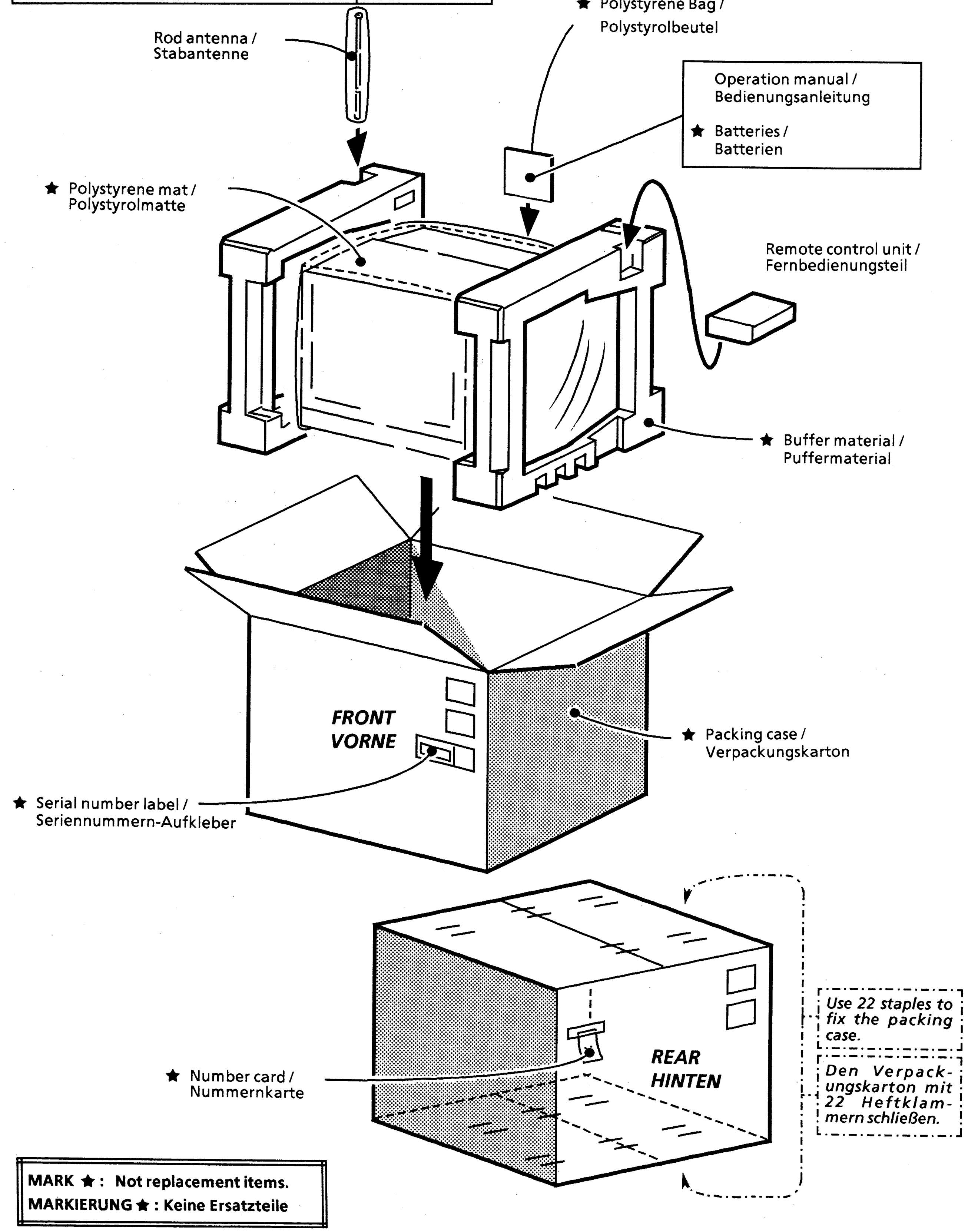
Ref. No.	Part No.	★	Description	Code
	QCNW-3778CEZZ	J	Extension Cable (AB to JA)	AS
	QCNW-3780CEZZ	J	Extension Cable (AC to LA)	AS

—— End of EXTENSION CABLES ——

PACKING OF THE SET/ VERPACKUNG DES GERÄTS (VT-3700S)

•Setting positions of the knobs / Einstellposition der Regler

Power Switch / Netzschalter	OFF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★ Polystyrene Bag / Polystyrolbeutel
Operation manual / Bedienungsanleitung
★ Batteries / Batterien
★ Polystyrene mat / Polystyrolmatte
Remote control unit / Fernbedienungsteil
★ Buffer material / Puffermaterial
FRONT VORNE
★ Packing case / Verpackungskarton
★ Serial number label / Seriennummern-Aufkleber
★ Number card / Nummernkarte
REAR HINTEN

Use 22 staples to fix the packing case.

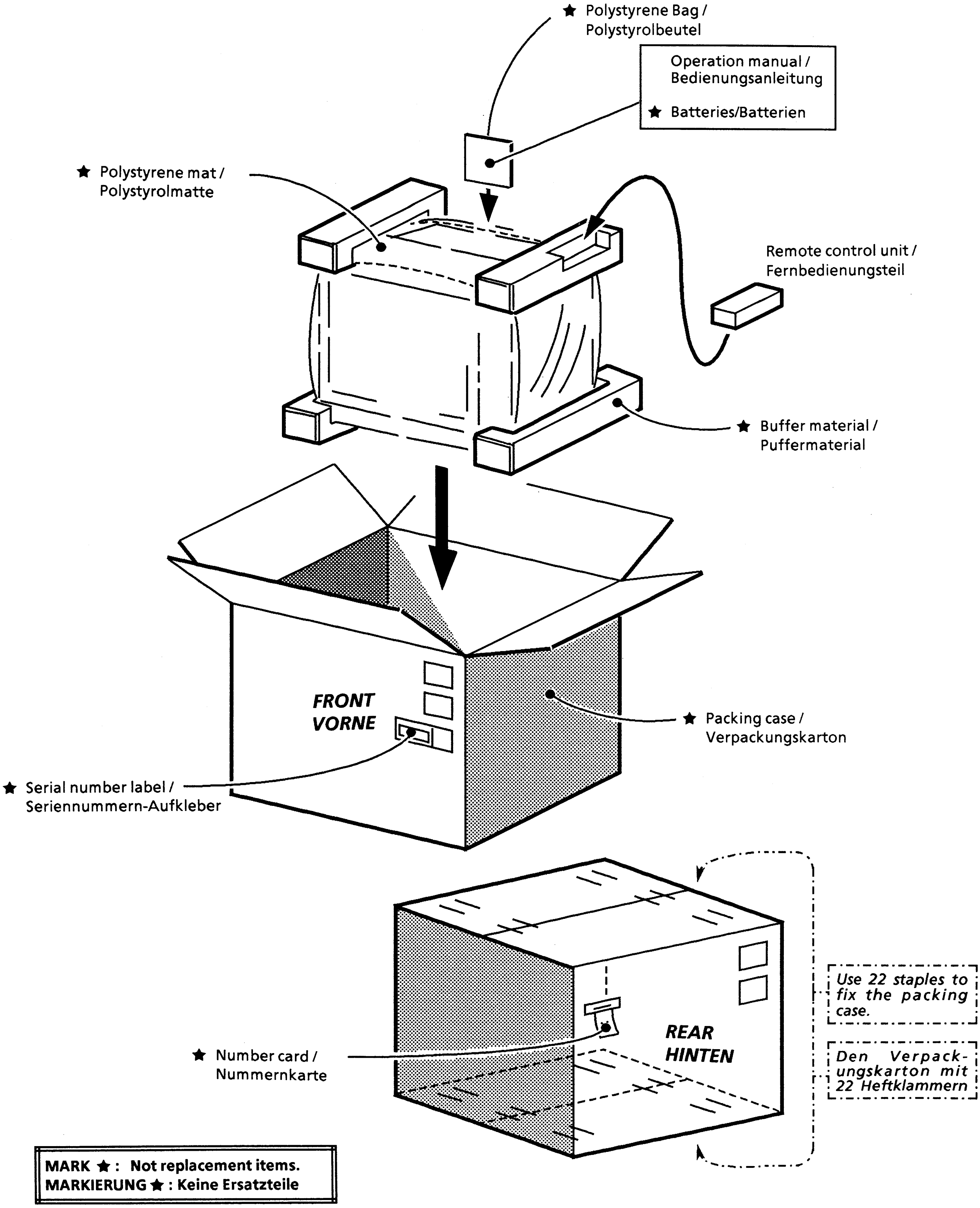
Den Verpackungskarton mit 22 Heftklammern schließen.

MARK ★ : Not replacement items.
MARKIERUNG ★ : Keine Ersatzteile

PACKING OF THE SET/ VERPACKUNG DES GERÄTS (VT-5400S)

•Setting positions of the knobs / Einstellposition der Regler

Power Switch / Netzschalter	OFF


★ Polystyrene Bag / Polystyrolbeutel
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Remote control unit / Fernbedienungsteil
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FRONT
VORNE
★ Packing case / Verpackungskarton
★ Serial number label / Seriennummern-Aufkleber
★ Number card / Nummernkarte
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HINTEN

Use 22 staples to fix the packing case.

Den Verpackungskarton mit 22 Heftklammern

MARK ★ : Not replacement items.
MARKIERUNG ★ : Keine Ersatzteile

VT-3700S
VT-5400S

SHARP

T9791-S
Printed in Japan
In Japan gedruckt
W/S MW. KG